

# MANUFACTURERS RECORD

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A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,  
Mining, Contracting, Engineering, Building and General  
Business Interests of the South and Southwest

Vol. 67  
No. 16

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Voting Bonds for Improved Highways  
in the South.

The Merchant Marine from a Southern  
Viewpoint.

Hints for Manufacturers in Figures of  
Exports.

Purchases of Railroad Equipment.

BALTIMORE, APRIL 22, 1915

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**LUMPY**

**"NEVER SHORT OF CARS"**

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**Clinchfield Coal Corporation**  
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MEXICO BRICK & FIRE CLAY CO., MEXICO, MO.

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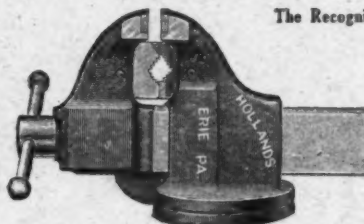
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Write for Bulletin 200.



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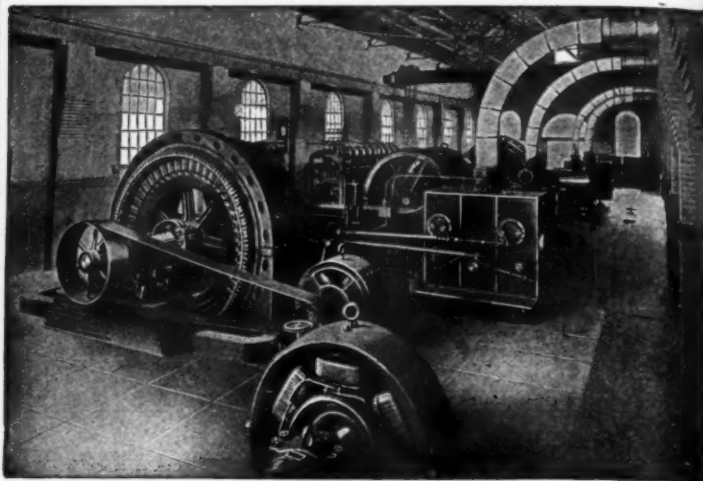
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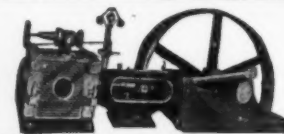
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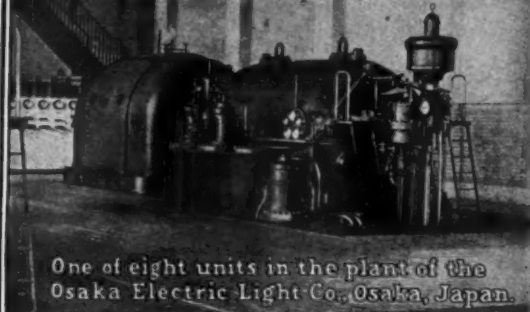
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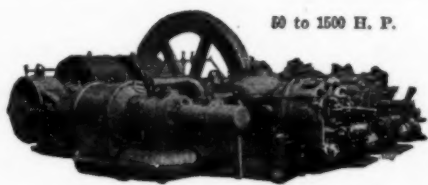


One of eight units in the plant of the Osaka Electric Light Co., Osaka, Japan.

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50 to 1500 H. P.

**Cheapest Source of Power**

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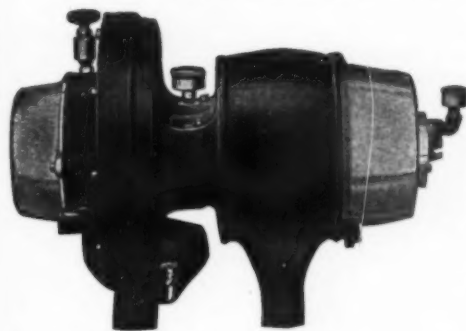
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S135.1

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Weights 290 pounds. Floor Space 18x28". Generates 1 K. W.



Steam turbine direct connected to generator.

Operates 35 16 c. p. tungsten incandescent lamps.

Requires 75 pounds steam pressure.

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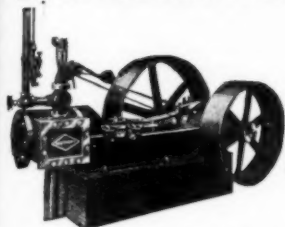
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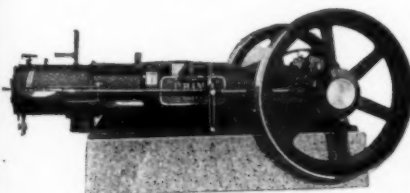
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Electrical Equipment, Wiring Supplies, Fixtures  
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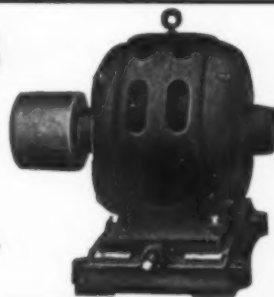
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Power when you want it, where you want it and as you want it.

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Built in sizes—10 to 50 H. P.

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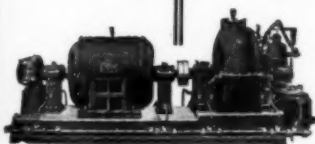
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**ENGINE BUILDERS**

**CORLISS ENGINES**  
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Terry's for Service—always.

Right now look over your plant and make all the improvements necessary to handle "big" business when it comes—and it surely is. For economy and efficiency by all means install

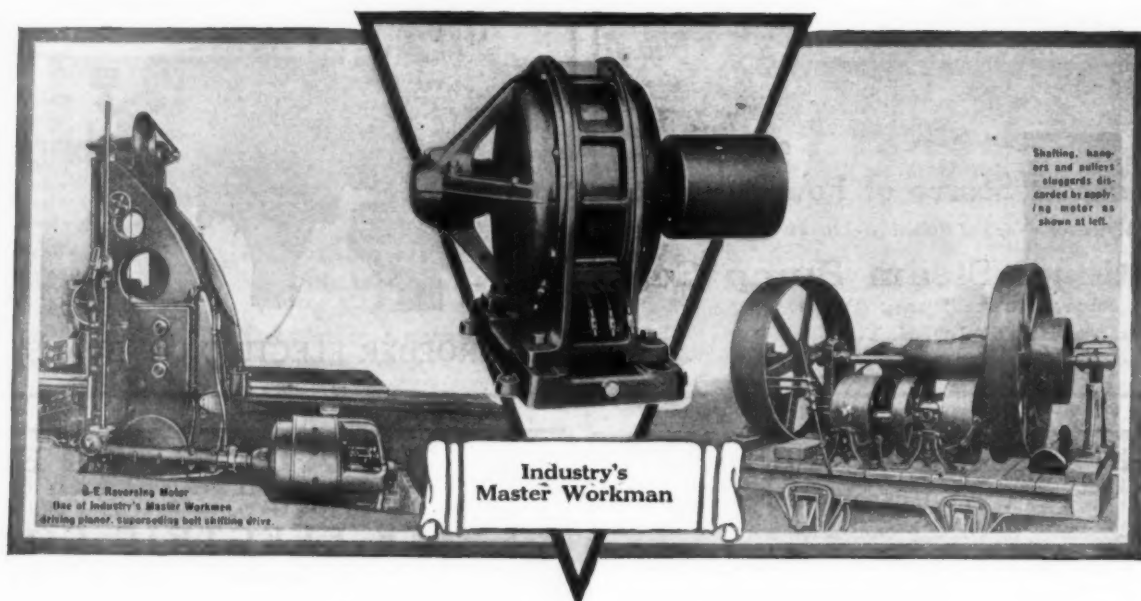
## THE TERRY TURBINE

Always reliable. Invaluable for continuous running. Requires practically no attention. Specified and insisted on for many of the leading central stations in the world.

May we send Bulletin 143 with full details?

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G-E Motors bring power and the producing machine together, cutting out those wasteful sluggards—shafting and belting.

These motors can be fastened to each machine or belted to a small group of machines, thus, to a desired extent, eliminating lineshaft friction and belt slippage. Since it is cheaper to transmit power electrically than mechanically, the user is money in pocket. This profit grows every minute the motors are used—it's a continual saving amounting to tens of thousands annually in one woodworking shop of a large sewing machine manufacturer.

If you are interested in cutting out power's wasteful sluggards, in maximum productive speeds sustained or varied at will, the economic use of floor space, power saving when machine is shut down and exact power cost records for every machine or department, our engineers will be glad to hear from you. Their services place you under no obligation. They will be glad to apply a G-E Motor—Industry's Master Workman and Economizer—to each of your machines.

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**Motor Agencies in All Large Cities and Towns**





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installed in one corner of a tool house on a farm, is shown in the accompanying illustration. This farmer, like many others, has a gas engine which he uses to run a counter shaft with which he operates a feed grinder, grind stone, etc. On this shaft is also belted the generator of a "Hyray-Exide" Electric Lighting Plant Unit, and while he is grinding feed or doing other work with his engine, he also charges the storage battery of the Unit.

When the engine is not running, the battery furnishes current for electric lights, thus giving a full 24 hour electric service by only an occasional operation of the engine.

"Hyray-Exide" Units make it easy for anyone not within reach of a Central Station to have his own electric plant. These plants are easy to install, easy to operate, perfectly safe and inexpensive.

Write our nearest office for our new book on electric lighting plants.

## THE ELECTRIC STORAGE BATTERY CO.

1888

PHILADELPHIA, PA.

1915

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Water Tube

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Stand Pipes, Self-Supporting Stacks, Tanks, Towers, all kinds of Structural and Plate Iron  
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## Chief Advantages of the VOGT WATER TUBE BOILER



You are not buying an experiment when you get one of our boilers. It was proved that it is unquestionably without an equal as a steam producer. Free from objections common to the general run of boilers. Constructed by expert workman of

the very best materials. Safe, sound and efficient. We will gladly go into details with all interested—prospective plants and those wanting to increase their present boiler efficiency.

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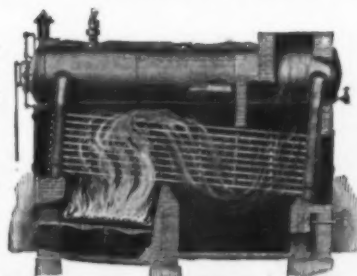
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50 years of Boiler Building—  
years without a shut down—  
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Established 1864

Williamsport, Pennsylvania

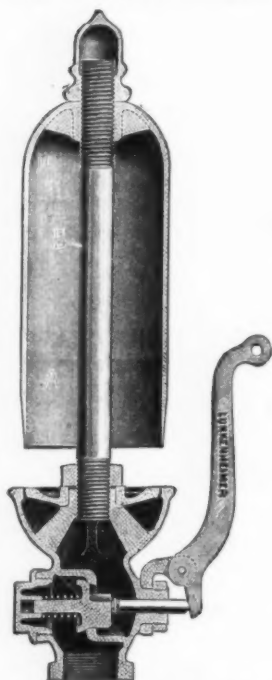
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Scientifically designed to produce the maximum volume of sound with the minimum expenditure of steam or air.

Made in great variety —  
*Plain, Single-bell  
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For use in  
Factories,  
Locomotives,  
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try them—  
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Guaranteed to heat your feed water to 200 degrees or more with the proper quantity of exhaust steam. Its brass tubes are all suspended from the top, enabling them to expand and contract with perfect freedom. We guarantee that the tubes will not become loose (as they do in some other types). All heaters are tested at 200 lbs. hydrostatic pressure before shipment.

*Write for Illustrated Catalogues.*

The Stewart Heater Co. 3 Norfolk Ave. Buffalo, N. Y.

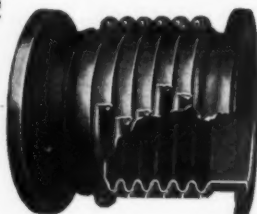
## A Slip Joint Is Not Enough!

You install a slip joint to take care of the pipe expansion—but you must look after it—you must see that it is properly packed—it often leaks.  
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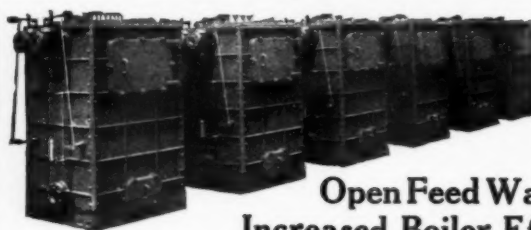
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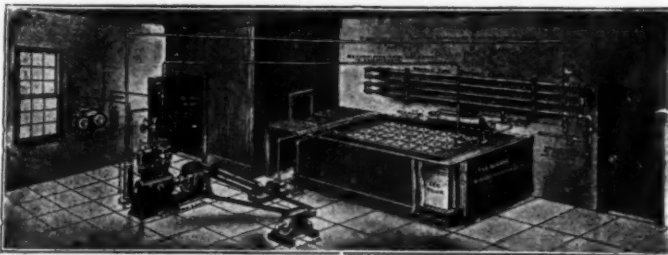
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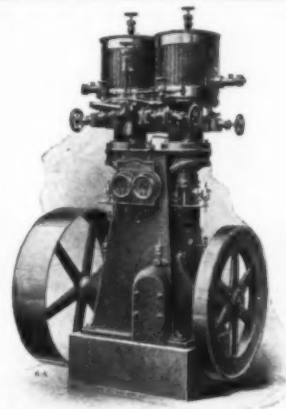
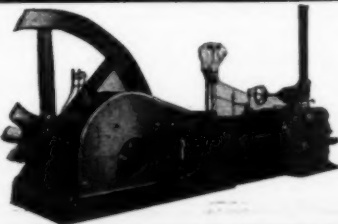
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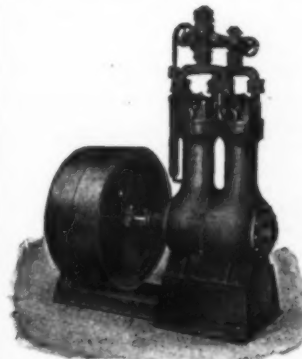
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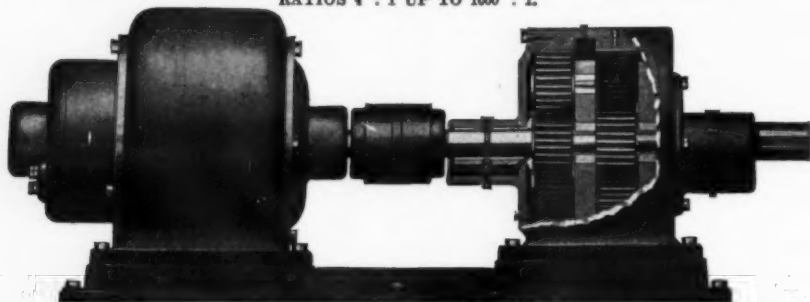
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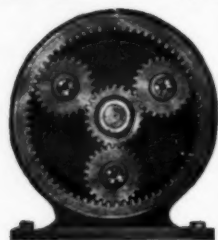
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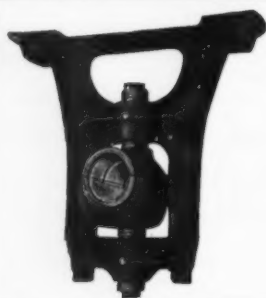
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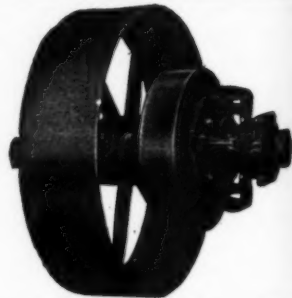


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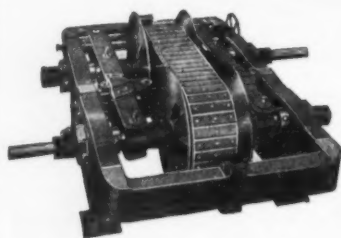
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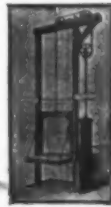
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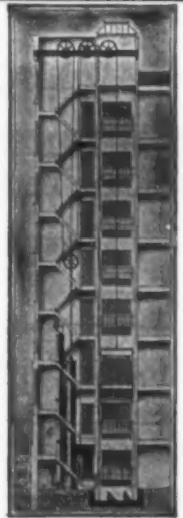
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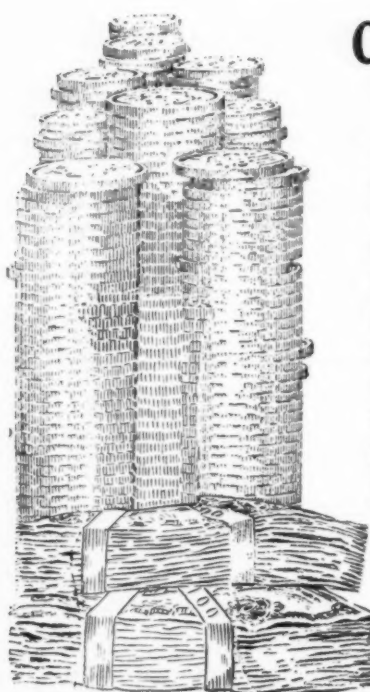


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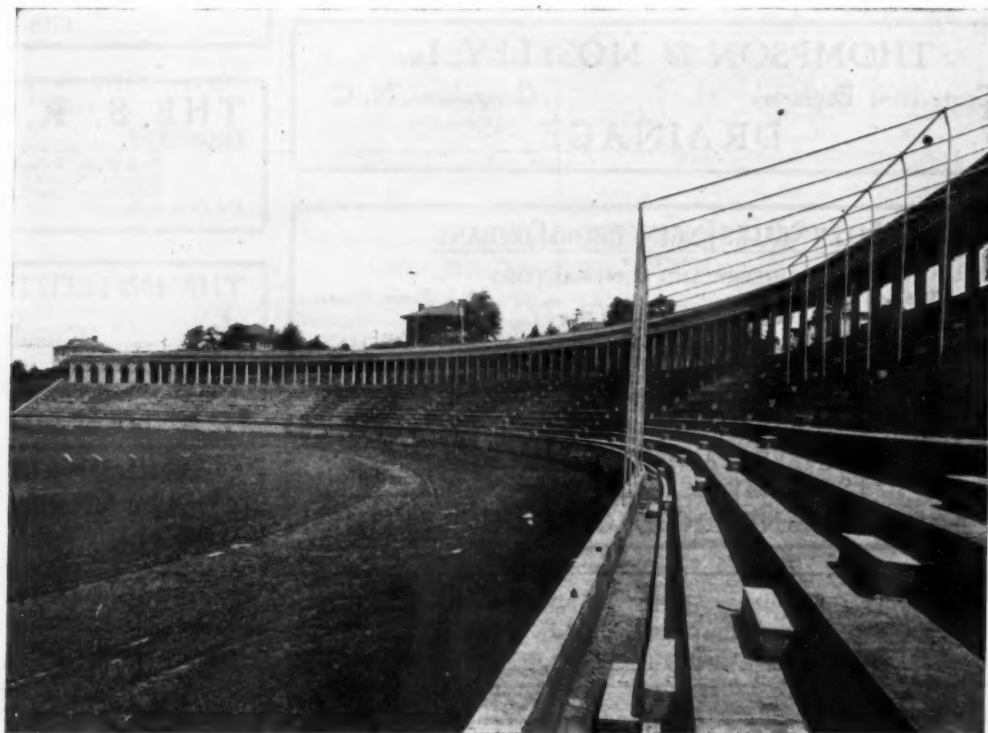
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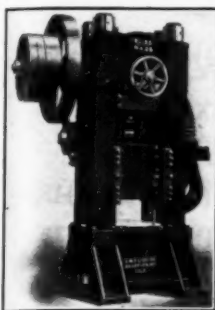
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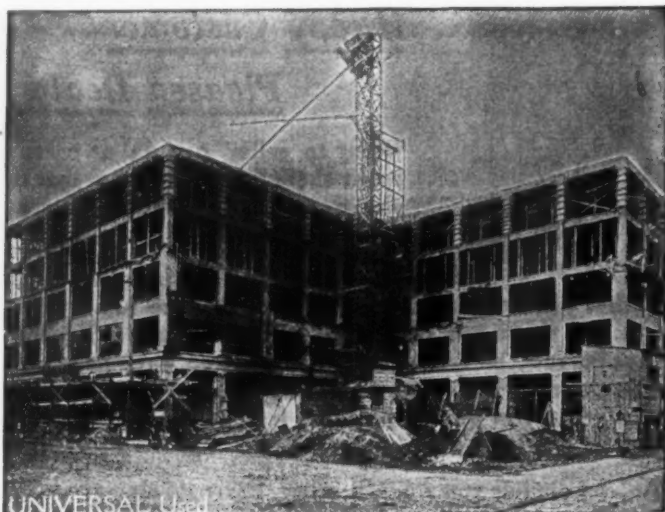
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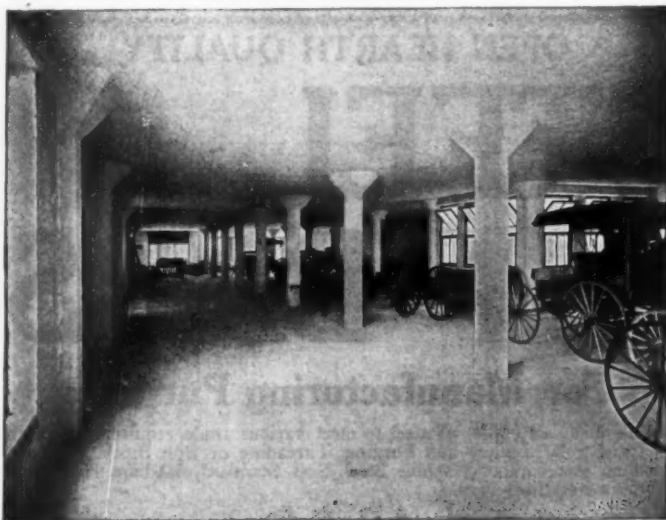


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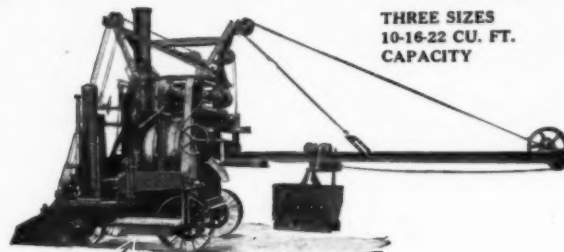
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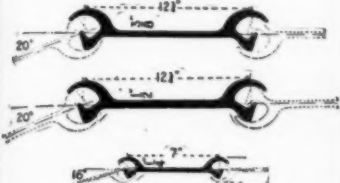
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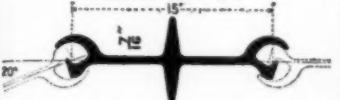
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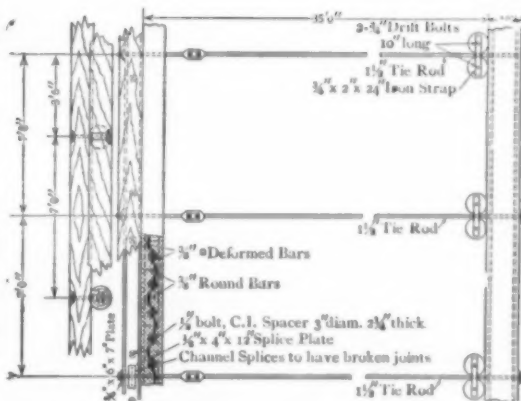


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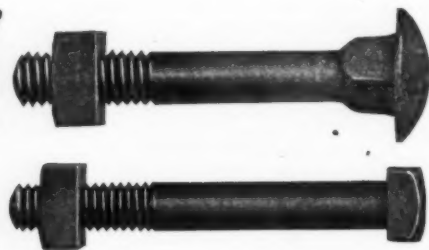
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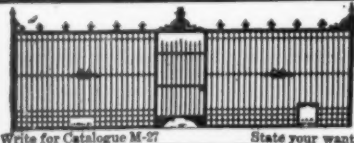
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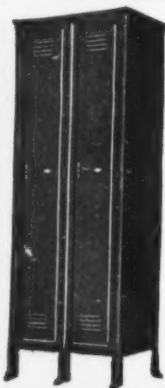
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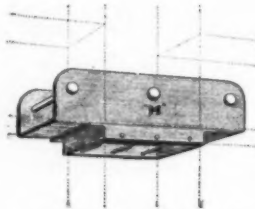
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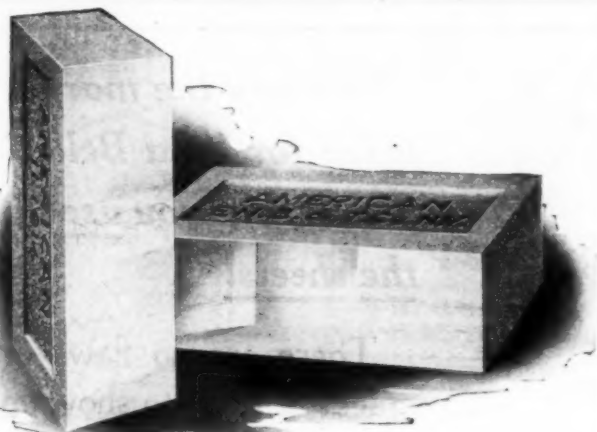
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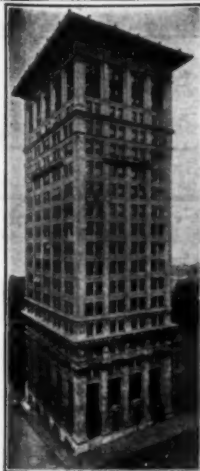
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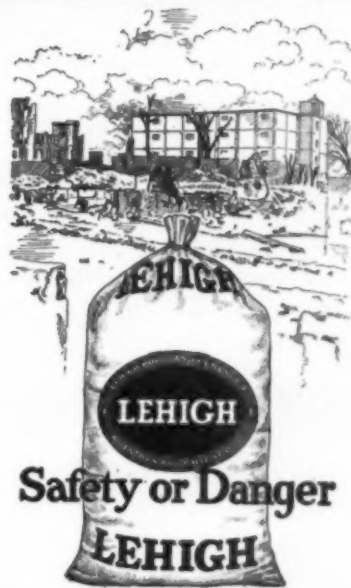
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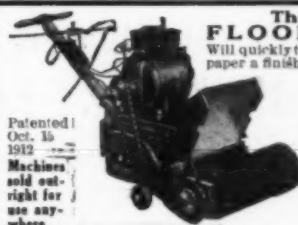
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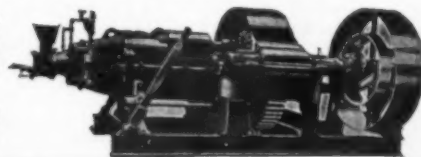
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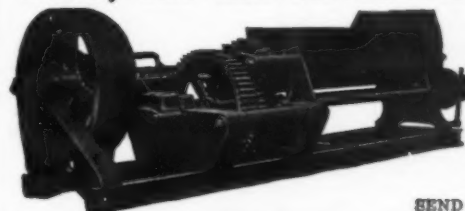
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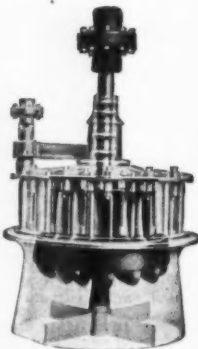
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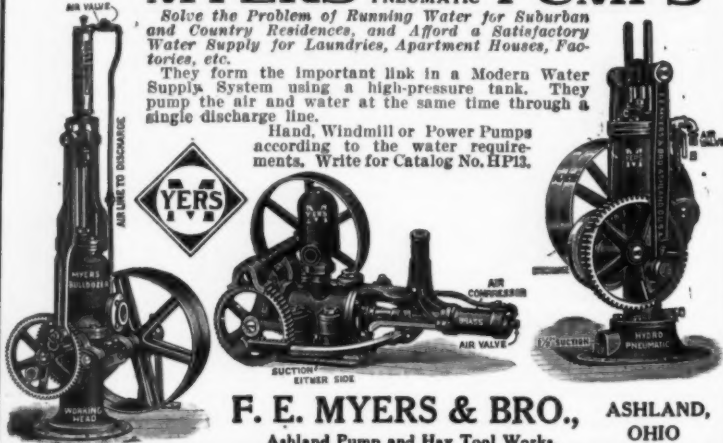


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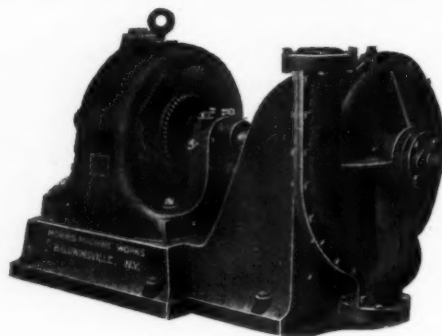
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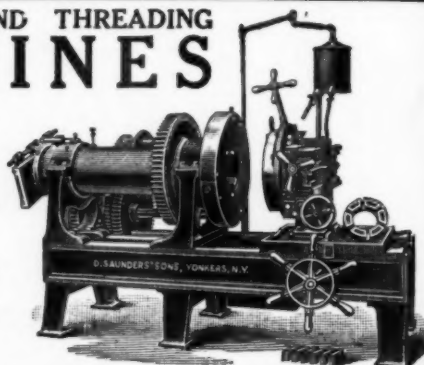
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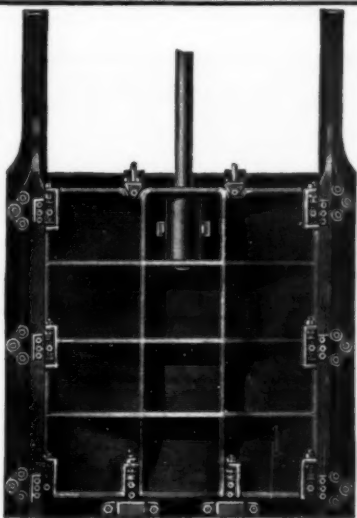
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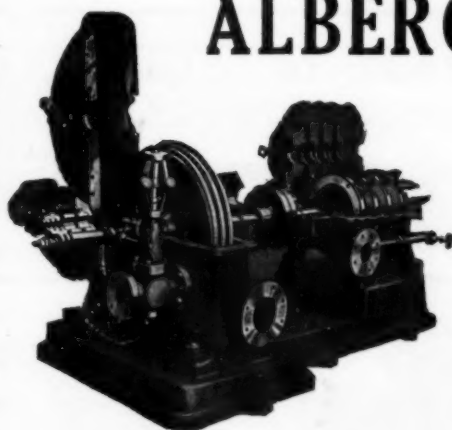
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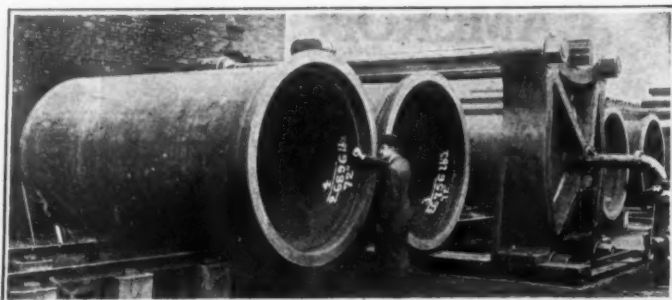
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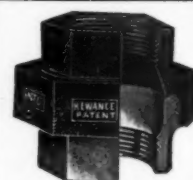
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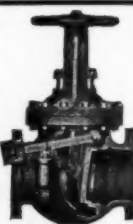


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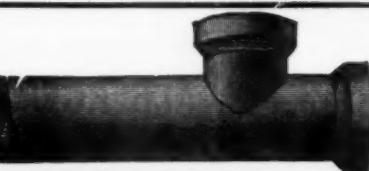
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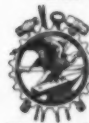
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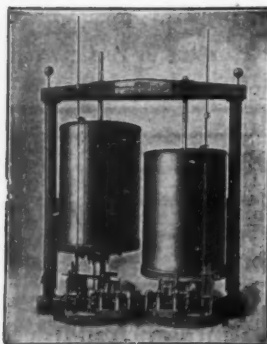
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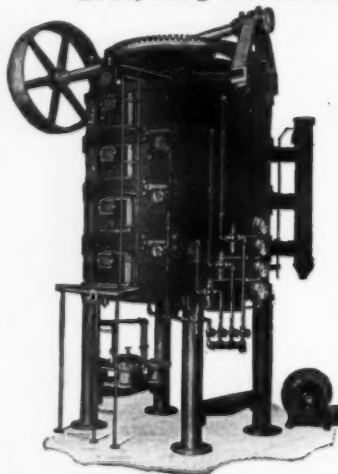
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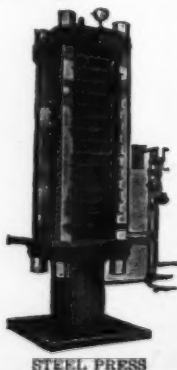
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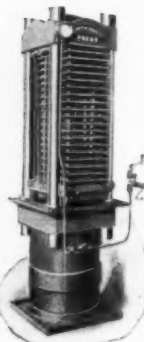
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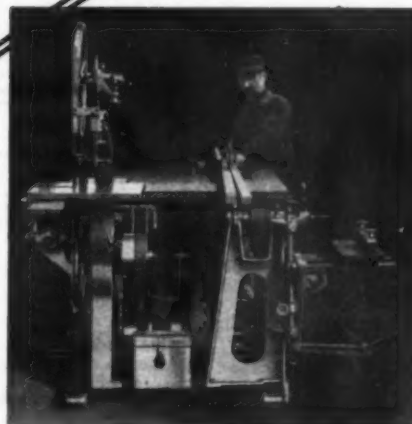
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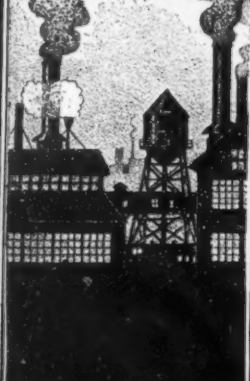
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## 100% Security



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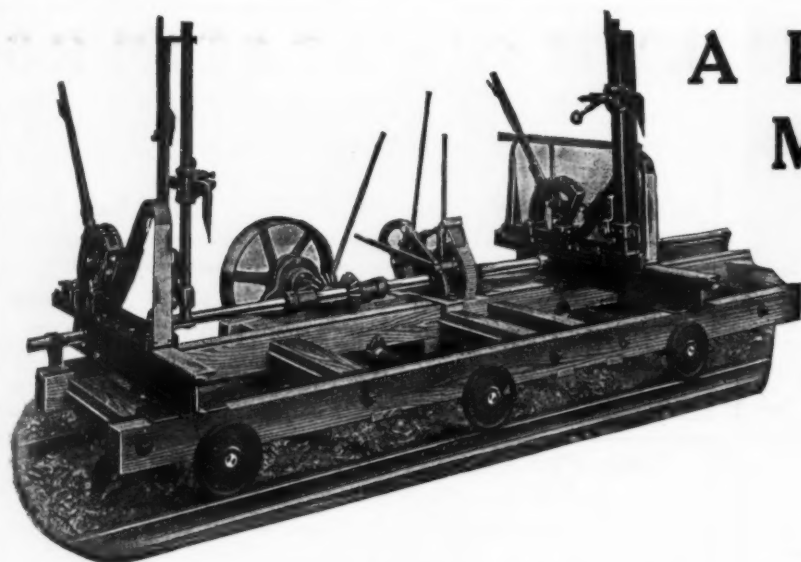
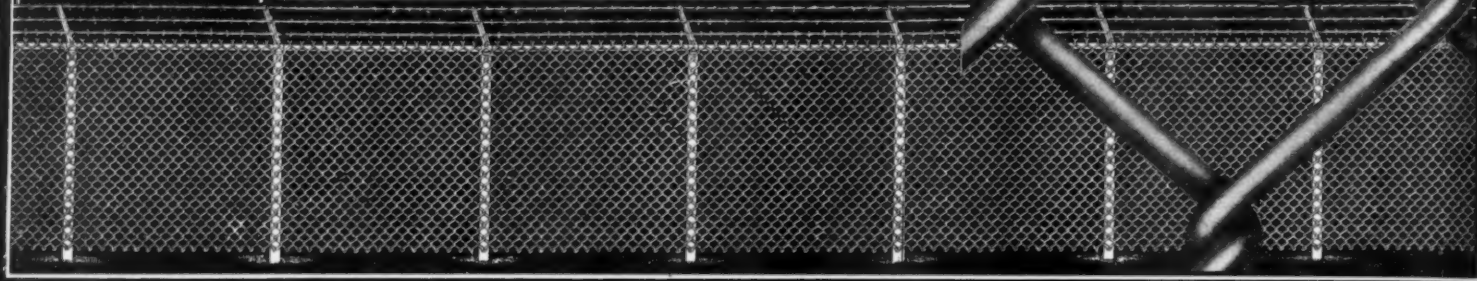
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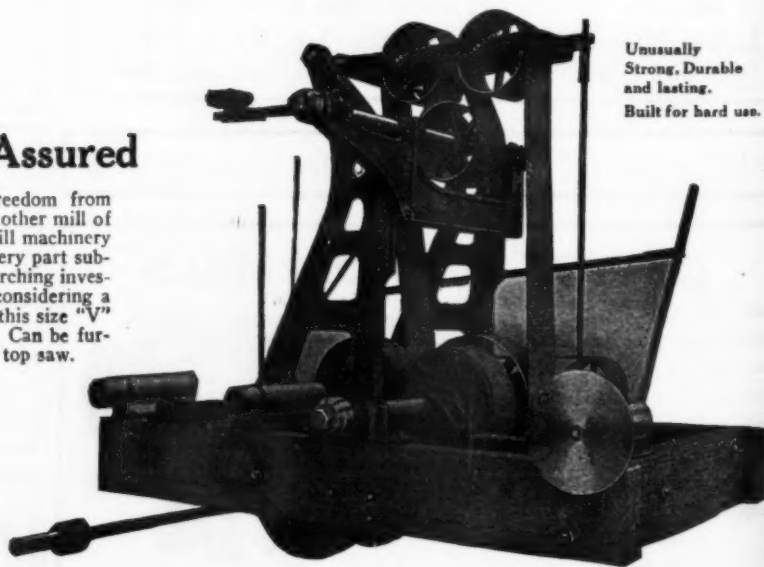
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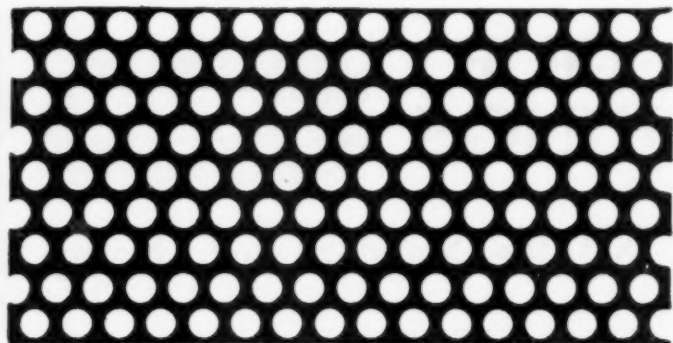
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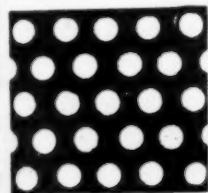
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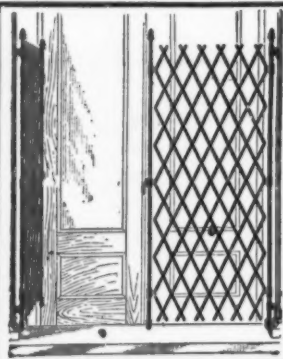
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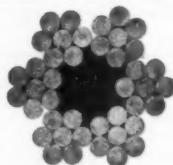
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A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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## BONDS FOR SOUTHERN HIGHWAYS.

WITHIN the past seven weeks provision has been made, either through votes of the people or otherwise, for the issue of nearly \$4,000,000 of bonds for road and street improvement in the South. That these issues have been made possible is an expression of confidence illustrating the general tendency in the South to return to normal conditions that were disturbed by events of the past few months at home and abroad. Among the issues are the following by localities in the several States:

Alabama:	
Lamar county.....	\$150,000
Florida:	
Dade county.....	100,000
Largo, city.....	11,000
Manatee county.....	250,000
West Palm Beach, city.....	100,000
Georgia:	
Macon, city.....	120,000
Kentucky:	
Ballard county.....	300,000
Knox county.....	200,000
Laurel county.....	100,000
Nicholas county.....	125,000
Rockcastle county.....	100,000
Louisiana:	
Jennings, city.....	75,000
St. Mary's parish.....	200,000
Terrebonne parish.....	105,000
Mississippi:	
Lafayette county.....	10,000
North Carolina:	
Alexander county.....	150,000
Chatham county.....	150,000
Polk county.....	15,000
Surry county.....	30,000
Swain county.....	100,000
South Carolina:	
Anderson, city.....	100,000
Chester county.....	18,000
Greenville, city.....	125,000
Sumter county.....	10,000
Tennessee:	
Montgomery county.....	50,000
Texas:	
Bell county.....	4,000
Brazos county.....	4,000
Calhoun county.....	60,000
Caldwell, city.....	12,000
Ennis, city.....	30,000
Gregg county.....	300,000
Hardin county.....	150,000
Karnes county.....	75,000
Medina county.....	40,000
Navarro county.....	75,000
Sumner county.....	12,000
Victoria, city.....	30,000
Virginia:	
Fairfax county.....	50,000
Nelson county.....	30,000
West Virginia:	
McDowell county.....	165,000
Total.....	\$3,731,000

It has been only recently that such bond issues have been permissible or have been encouraged

through State co-operation in some Southern States, and even now there is quite a variation in the character of the governmental units which issue them, either Statewide, county, township, road district or magisterial district, while the degrees of State participation are also limited in various ways. The interesting fact just at this time is the indication of determination on the part of the people to continue the work of highway improvement, in which the South has been notably active of late years, and to continue it in spite of dullness in many lines, or, perhaps, because of that very dullness. In several instances it has been found that contractors upon public work are willing to bid somewhat lower than usual as part of the growing feeling that about the best way to bring about a full resumption of activities is to make sacrifices, if need be, in contributing to the undertaking of new work here and there. Accompanying the provision in forty widely separated communities for the issue of bonds for road improvement have been the sale of issues previously authorized, and campaigning, still under way, for voting upon other proposed issues in the near future.

The popularity of the bond issue for such work is steadily growing, together with a realization that the form of bond most acceptable to investors is the serial or short term, not extending beyond the life of the improvement as originally made. At the same time public authorities are becoming more and more impressed with the fact that the problem of maintenance is quite as important as that of the construction of improved highways, and that both must be considered in planning the financing of the improvements. But behind all is the enthusiasm of the people as they perceive the advantages that come to a community with the extension of the means of easy communication with other communities and other immediate benefits inherent in good roads.

## BRAZIL AND CEMENT.

THE output of Portland cement in the United States in the calendar year 1913 was 92,097,131 barrels, an increase over that of 1912 of 9,659,035 barrels. The exports of the cement in 1913 were 2,964,358 barrels, a decrease of 1,251,174 barrels. That the exports have never represented any great proportion of the production is to be accounted for largely by the fact that the rapidly increasing use of cement in construction work of many kinds in this country has really left little surplus for sale in foreign lands. Still, with the tendency common to most large American industries to bring the productive capacity to a point where at times the possible output may be greater than the immediate demand, cement manufacturers can hardly lose in giving attention to the opportunities for greater markets in foreign lands where developmental activities prevail. Brazil is one of those countries, and, consequently, suggestions in Commerce Reports by United States Consul-General Alfred L. M. Gottschalk at Rio de Janeiro may be of practical value. Although two cement factories have been established in Brazil, neither of them is in operation at present, and although more than 80 per cent. of the cement imported by that country has come from Europe, the value of such imports from the United States in 1913, amounting to \$765,023, or nearly one-ninth of the total, was more than twice the value of the 1912 imports, \$275,942, or about one-twentieth of the total. World trade conditions of 1914 were reflected in the Brazilian cement trade. The imports fell in value to about \$2,000,000, less than a third of that of 1913. This Mr. Gottschalk attributes to temporary business depression in the country, curtailing

construction work and building operations of all kinds, especially those of the Federal Government, a large user of cement; to the part-shutting off by the war of the European source of supply, and to other developments of that war. He believes that in that situation is the chance for American manufacturers of cement to strengthen their position in the Brazilian market, which seemed to be growing when the interruptions of 1914 came.

## HINTS FOR MANUFACTURERS IN FIGURES OF EXPORTS.

IN the erratic of American commerce consequent upon the war in the current fiscal year are suggestions of especial interest to the South. That section contributes, in proportion to its area, more than the rest of the country to the annual exports of merchandise from the United States. That is why the decrease in exports since last July has affected the South to a greater extent than the rest of the country. In the past few weeks has come a change for the better. But the facts up to the time when that change began are worth a little study. They are reflected in the figures of the following table comparing values of thirty-seven classes of merchandise exports in the first eight months of the fiscal years ending June 30, 1914 and 1915, respectively:

	Increase.	
	1914.	1915.
Wheat and flour.....	\$106,200,000	\$288,000,000
Meat and dairy products.....	102,700,000	114,300,000
Cotton manufactures.....	34,800,000	42,700,000
Fruits and nuts.....	26,200,000	26,500,000
Chemicals, drugs, etc.....	17,500,000	22,900,000
Oilcake and meal.....	16,700,000	19,500,000
Upper leather.....	14,800,000	20,800,000
Boots, shoes, etc.....	12,300,000	12,900,000
Cottonseed oil.....	9,200,000	12,100,000
Rubber goods.....	8,000,000	8,800,000
Sole leather.....	4,700,000	14,000,000
Vegetables.....	4,300,000	7,600,000
Explosives.....	4,100,000	12,300,000
Woolen manufactures.....	3,100,000	17,400,000
Horses.....	1,800,000	32,000,000
Harness and saddles.....	1,600,000	17,100,000
Refined sugar.....	1,300,000	19,600,000
Commercial automobiles.....	800,000	14,000,000
Mules.....	500,000	3,900,000
Zinc.....	300,000	12,700,000
Total.....	\$370,900,000	\$720,300,000

	Decrease.	
	1914.	1915.
Raw cotton.....	\$498,900,000	\$243,900,000
Iron and steel manufactures.....	171,000,000	121,300,000
Mineral oils.....	99,700,000	85,000,000
Copper manufactures.....	96,900,000	58,600,000
Lumber and wood manufactures.....	68,400,000	32,000,000
Tobacco and manufactures.....	43,100,000	32,300,000
Coal.....	42,200,000	35,300,000
Cars and carriages.....	33,500,000	31,700,000
Agricultural implements.....	20,800,000	4,600,000
Electrical machinery.....	17,700,000	12,900,000
Passenger automobiles.....	14,900,000	7,600,000
Naval stores.....	13,900,000	6,300,000
Paper manufactures.....	13,700,000	12,200,000
Fish.....	10,400,000	8,100,000
Fertilizers.....	7,200,000	2,200,000
Photographic goods.....	6,000,000	4,000,000
Paints and varnishes.....	4,700,000	4,200,000
Total.....	\$1,163,600,000	\$702,200,000

The value of the exports of these thirty-seven classes of merchandise in the full fiscal year of 1914 constituted about 74 per cent. of the value of all exports in that period. Their value in the first eight months of the current year is 88 per cent. of the value of all merchandise exports, \$1,001,299,505



In that period. So they may be regarded as fairly typical of the general tendency in the current year. Between July 1, 1914, and February 28, 1915, the value of these thirty-seven classes of exports was \$1,422,500,000, a decrease under the same period of the preceding fiscal year of \$112,000,000—not such an enormous decrease, indeed, in a total annual value of more than \$2,000,000,000. Twenty of the classes showed an aggregate increase of \$349,400,000, from \$370,900,000 to \$720,300,000; seventeen of them showed an aggregate decrease of \$461,400,000, from \$1,163,600,000 to \$702,200,000. The marked increases were \$181,800,000 in flour and wheat, that increase in eight months being \$39,400,000 more than the total value of such exports in the last fiscal year; \$30,800,000 in horses, \$18,300,000 in refined sugar, \$15,500,000 in harness and saddles, \$14,300,000 in woolen goods, \$13,200,000 in commercial automobiles, \$11,600,000 in meat and dairy products, \$9,900,000 in sole leather, \$8,200,000 in explosives, \$7,900,000 in cotton goods, \$6,000,000 in upper leather, and \$5,400,000 in chemicals and drugs.

Raw cotton showed a decrease of \$255,000,000, more than half the total decrease in seventeen classes, the other marked decreases being \$50,300,000 in iron and steel manufactures, \$38,300,000 in copper and manufactures, \$36,200,000 in lumber and wood manufactures, \$16,200,000 in agricultural implements, \$14,700,000 in mineral oils, \$10,800,000 in tobacco and its manufactures, \$7,600,000 in naval stores, \$7,300,000 in passenger automobiles, \$6,900,000 in coal and \$5,000,000 in fertilizers.

Raw cotton, naval stores and fertilizers produced virtually in the South alone showed an aggregate decrease of \$267,000,000, which, added to the share of that section in the exports of tobacco, lumber, mineral oil and coal, brought the decrease in which the South is immediately interested to quite \$300,000,000. It will be noted that these particular decreases were in what may be called raw materials. Take from the annual volume of exports the raw materials originating in the South, and the importance of the United States in world commerce would be considerably diminished. In 1914, for instance, its cotton represented \$610,000,000, its naval stores \$20,000,000, its oilcake and meal \$11,000,000, its cottonseed oil \$13,800,000, its phosphate rock \$10,000,000, its tobacco \$40,000,000, and its timber and lumber \$27,000,000, a total of \$732,400,000 for raw materials in aggregate exports of \$2,330,000,000.

What has the war demonstrated in this connection? In the first place, that such raw materials as foodstuffs and feedstuffs can, in existing conditions on the globe, hardly be raised in too great quantities in the South, primarily to assure a reasonable cost of living for our own people, and, secondarily, to limit naturally the production of cotton to the point where its price will repay the labor and expense of the growers. The war has, of course, been responsible for the more than doubling of the value of exports of wheat and flour in the first eight months of the current fiscal year, for the expansion of the value of exports of the value of other foodstuffs, such as meat and dairy products, refined sugar, cottonseed oil and vegetables. It accounts for the increase in the exports of explosives, leather and leather goods, automobiles, horses, mules, etc., all going into destructive and uneconomic consumption, and, at the same time, it accounts for the decline in exports of iron and steel manufactures, copper and copper manufactures, timber and lumber, fertilizers, naval stores and raw cotton. These marked differentiations from the normal may be expected to disappear more or less rapidly when the war is brought to an end. But there have been certain developments which may be widened in their scope if the producers of the United States act wisely and promptly.

They will lose time and, perhaps, money, if they undertake impossibilities under the spur of necessity or impractical business patriotism. They cannot build up in forty days or forty weeks a dyestuff industry, for instance, to approach in magnitude or efficiency that which has taken forty years to develop elsewhere. But, while they should leave nothing legitimate undone to bring about, through Government activities or otherwise, some relief from what in some quarters appears to be a serious ob-

stacle in the way of maintaining certain industries dependent upon dyestuffs for their regular operation, they can lead in encouraging a spirit that will make the best of the situation as Americans have done before. Again, they may plan for entrance into foreign markets temporarily shut off from their usual sources of supplies or into entirely new markets. But they must remember that foreign trade is a growth calling for time, patience and money, and cannot be gained by simply desiring it, and where they attempt to gain a permanent standing in a competitive field they can hope for success only in supplying better goods upon better terms than their competitors.

The South especially might find a hint in the fact that at the time when the value of its exports of raw cotton has decreased at the rate of 51 per cent. the value of exports of cotton goods has increased at the rate of nearly 23 per cent., and that the value of exports of cotton goods is only one-sixth of the value of the exports of raw cotton. War or no war, the market for cotton goods must steadily enlarge. It is larger today in the United States than one might imagine from the comparatively slack efforts of the right kind on the part of manufacturers to cultivate it. It is growing larger and larger here every year, probably at a more rapid rate than in the rest of the world. Without neglecting the opportunities in other countries, our manufacturers might find great gain in looking into the home situation and taking advantage of the openings there. Foreign markets have their attractions. For the full development of the natural opportunities and possibilities of this country they must be cultivated. In many particulars we have an equipment for industry much greater than the apparent demand in this country for their products. Much of our export trade in the past has been based upon raw materials that should be manufactured at home and the surplus of manufactured products for which it was thought there was no home market. With the exception of a few industries nation-wide in their activities and their influence, our manufacturers have paid little attention to the particular wants of foreign markets, and have been influenced by their own wish to sell rather than by the wish of others to buy. In the lull that the war has induced is the chance for all of us to gauge accurately the home situation, to prepare to work up to it and to place ourselves at that point of vantage to move into wider spheres of profit.

#### THE SALE OF COTTON GOODS.

IN his presidential address before the annual meeting last week of the American Cotton Manufacturers' Association Mr. T. I. Hickman of Augusta, Ga., president of the Graniteville Manufacturing Co., dwelt at some length upon the question of the distribution of cotton goods. He said that there is much complaint that the marketing of the goods is faulty, some persons placing the blame upon the commission merchants in the large cities, and others tracing the trouble to the failure of the mills to unite upon some reasonable basis. Mr. Hickman is inclined to believe that both interests are at fault in that they both lack proper organization. About thirty years ago Arthur P. Gorman, then United States Senator from Maryland, said in the course of a private conversation that we had in this country practically solved the problem of production, and that the coming problem would be that of distribution. He had in mind especially the matter of transportation. That is, of course, one of the most important elements to be considered. But equally important is the matter of selling products after they have been transported to the main markets and the selection of the main markets. In some lines of agricultural production there has been marked success in solving the problem of distribution without trenching upon the Sherman law, even did that law extend in all its force to organizations of farmers. Taught by the losses due to individualism in marketing, resulting so often in glutting of the markets, the growers have wisely provided a central agency to care for all the details and to gain the information that will enable shipments of fruits or vegetables to

be shifted from centers where the market is well supplied to other points where there is not enough. Again and again the cotton-mill men have tried to approach some such working plan in their own line, but the criticism of Mr. Hickman voices the lack of success. Does he not touch upon a possible explanation in his statement that a great trouble with the mills, and particularly with those in the South, is the burden of debt they are carrying, which compels them to sell goods at inopportune times in order to have money with which to carry on their operations, and the additional statement that much of the debt is due commission merchants, who at times get tired of carrying goods, and so sell them? To be sure, this situation tends to the disadvantage of commission merchants and the mills alike. But it suggests a point of weakness that may account in large part for the failure of the best efforts to better marketing conditions. The desire of both parties to the difficulty is, of course, to prosper. That cannot happen if they are at more or less cross-purposes and involved in financing of a shortsighted character. Only the men immediately concerned are qualified to deal with the question authoritatively. But to the layman it seems that the difficulties are not insurmountable, and although the very number of independent cotton mills in the country is patent evidence of the individualistic spirit that dominates in their management, there are interests common to all of them of sufficient importance to warrant the yielding here and there of some minor matters for the good of the whole body of manufacturers and selling agents.

#### PURCHASES OF RAILROAD EQUIPMENT.

THE Pennsylvania Railroad Co.'s announcement that it will begin immediately the expenditure of \$28,000,000 for motive power and other equipment is by far the most encouraging business note which has been sounded for ever so long a time, because, in addition to its magnitude, it reflects the official opinion behind it that preparation must be made to adequately handle traffic, and also that the increase of business in sight is practically all home grown and not altogether an outcome of orders received from the warring countries in Europe.

An investigation of the equipment program discloses that 194 locomotives, 16,245 freight cars and 181 all-steel passenger cars will have to be provided at once to put the Pennsylvania in a position to properly perform its duties as a common carrier. The company builds most of its engines and many of its cars, but it will be in the market for materials to construct these, yet contracts for much of the equipment, viz., 90 of the passenger coaches and 7643 of the freight cars, will be awarded to the lowest bidders among the great car-building concerns of the country. Many of the freight cars are to be of all-steel construction.

Builders of railroad equipment will be greatly heartened by the influx of business from this source, and particularly for the reason that the Pennsylvania's readiness to spend money for new rolling stock will encourage other companies to do likewise. It is understood that prices for cars and locomotives have been lower for several months than usual because lack of work has induced at least some plants to accept orders at figures which would not have been even considered in ordinary times. Business with the builders was exceedingly dull last year, but since January 1, according to current reports in trade circles, it has been worse. Maybe this was the darkness before dawn, and that from now on there will be an improvement.

The Baltimore & Ohio, the New York Central, the Erie and others are expected to place equipment contracts for 1915, and the various visible evidences of an improvement in commerce and industry will, it is believed, hasten the buyers to reach decisions concerning their purchases. Undoubtedly purchasing of much railroad equipment will have a beneficial influence upon other lines of industry and also upon commerce. It is impossible to put in circulation large sums of money in the form of wages, etc., without its radiating considerable good to other lines of human endeavor. Everybody, therefore, must experience a lively satisfaction that the Penn-

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sylvania has taken a lead in the forward movement among the transportation companies, all of which truly said that the advance in freight rates which they had asked would be followed by a liberal policy on their part; in fact, that it could not be otherwise, for the money had to be expended to enable them to fulfil their duties to the public.

### AND IT CAN HAPPEN AGAIN.

**L** EFT college to go to farming. The first thing, got married. Bought \$400 worth of land on credit, fifteen miles from any town. Paid for the land in two years. Now free from debt. Cultivates eighteen acres of land. Last year made \$200 worth of peanuts, \$115 of corn and \$90 of hay, gathered 200 bushels of sweet potatoes, killed 900 pounds of meat, all fattened on peanuts and potatoes, and paid all his living expenses with garden vegetables, chickens and eggs.

That is the condensed record of the experience of a young man in Southwest Mississippi detailed by O. P. McPherson of Gloster, Miss. He describes his friend as an "uneducated boy." He must mean by that that the young fellow did not complete his career at college. For he surely had the education which sometimes a college cannot better and sometimes a college can spoil—the education in making the most of one's self and one's opportunities, the education that calls for intelligent observation and the practical application of the results of observation, for the exercise of gumption, or common sense, which is sometimes obfuscated by too much book learning, and for self-reliance and courage. Certainly the young Mississippian showed courage in getting married the first thing, as he went into debt to obtain a farm. But it would have been rather a bad case of loneliness for him off there by himself fifteen miles from any town. So who can blame him? Some of the details of his three years' experience are lacking, but the results forbid escape from the conviction that his getting married the first thing was only one of the manifestations of his pluck and gumption.

Mr. McPherson wants somebody to attempt to tell what per cent. of profit the young man is making. As he seems now to be playing on velvet, the answer is difficult. The \$400 debt represented in the actual purchase of the little farm was wiped out by the products of the farm itself. In the process of wiping out the debt the value of the investment in the farm was increased. But the \$405 of returns in cash in one year, together with the returns in products not given a money value, while an enormous per cent. of profit upon the \$400 paid by the land for itself, would not have been realized without the application to the land of the brain-power and the heart-power of the young man. They constitute the greater part of the capital in any successful enterprise, whether a \$400 farm, a \$4,000,000 manufacturing plant or a \$40,000,000 railroad. That form of capital is generally overlooked, especially by professional "uplifters," whose chief capital is wind-power, in discussions of the relations of capital, labor and the public. But it is fundamental. The experience of the young man in Southwest Mississippi is a striking illustration of its importance. And that experience can be enjoyed by hundreds of thousands of other young men.

### Optimistic Notes Reported.

Inquiries at Chicago for about 500,000 feet of Louisiana red cypress tank and greenhouse lumber.

Mercereau-Hawkins Tie Co. of Huntington, W. Va., receives order from the Chesapeake & Ohio Railway for 150,000 cross-ties.

Sale of 16,580 barrels of rosin effected at Pensacola, Fla.

Huntsville lumber plant of the H. H. Hitt Lumber Co. of Decatur, Ala., again on full time.

Hardwood mill of J. P. McIntyre at Pine Bluff, Ark., resumes operations.

Mascot, Tenn., plant of American Zinc Co. increasing its capacity to 1800 tons of ore a day.

## The Merchant Marine from a Southerner's Viewpoint

By WILLIAM GATEWOOD, Naval Architect, Newport News Shipbuilding & Drydock Co.

The merchant marine is an international as well as a national subject. The important questions to settle are whether the sea-borne commerce of a country should be carried by foreign vessels or by domestic vessels, and if by domestic vessels, what sacrifices should be made by the country at large for the encouragement of its merchant marine.

At the present time our foreign commerce is composed of two distinct parts. We are still exporting from the abundant natural resources of the country. Our cotton, tobacco, corn, wheat, copper, gold, coal, lumber, oil and numberless other articles in the rough are shipped abroad. On the other hand, we export a large quantity of manufactured products, principally to those countries which have not yet advanced to that degree of development in which manufactures supplement agriculture and mining.

It is possible to conceive of a country which produces everything it consumes, but such is not the case in this country of ours. We produce more cotton, tobacco, grain, steel, etc., than we consume, and we consume tea, coffee and other things which we do not produce at all. We consume also many things, such as iron ore, fertilizers and manufactured goods of many kinds in greater quantities than we produce them. This exchange of commodities, while it varies in amount and kind from year to year and from decade to decade, serves to enable each section of the country to develop in the way to which it is best suited. If carried to an extreme, however, it serves to prevent the beginning of a development of industries which in their matured condition would prove of inestimable advantage to the country.

All industries which are needed for the promotion of the national defense should be fostered, if necessary, at the public expense. Indeed, all industries which affect the comfort and welfare of the inhabitants of the country to a great degree should be fostered, as a country should be dependent on outsiders only for luxuries and not for the necessities of life. Likewise, the natural resources of the country should be conserved so that the country shall at no future time be dependent on other countries for anything more than can possibly be helped.

How does the United States stand, when judged by the real standard of independence? We have men: we raise foodstuffs enough, except tea and coffee; we have fuel, timber, iron, copper, cotton, wool, leather, and almost all the other raw materials necessary in time of war; we have factories and mechanics. We have a navy which is adequate for purposes of defense against any of the smaller nations of the world, but which is insufficient to provide defense against any country which has a navy of approximately the same power as our own. It is not powerful enough to keep communications open, however, and our trade would suffer even if the safety of our seaports were not endangered. But our commerce might be interfered with seriously, even if our navy were able to maintain communications, because we would be dependent on the vessels of foreign nations to do our overseas carrying, and those nations might be in coalition against us.

But what about the value of commerce in times of peace? To us, it has meant in times past prosperity for farmers and farm owners in South and West and for merchants and manufacturers in North and East. At present it means not as much prosperity relatively as formerly, but still the interference with commerce caused by the European war has been felt very keenly by some portions of our country, and the little of prosperity we now enjoy is the result of the increase in commerce in those commodities which the Allies are clamoring for to aid them in the war.

The fact that we are a debtor nation is probably responsible for the depression which hangs over our steel mills and other industries which thrive only when money is being invested in large quantities in new operations or in upkeep of our railroads, etc. Our commerce is likely to save the country from a panic and from great general distress until the termination of the present war. And in the future the natural resources of this country and our skill in manufactures will surely make

commerce a leading factor in the life of the country. Exports will increase by leaps and bounds, and with increased wealth imports will increase equally as rapidly, for nothing that the rest of the world can produce will be missing from our markets.

As it is self-evident that the commerce of the United States will continue to grow, it becomes of great importance that the advantages to be derived from its transportation should be appreciated at their true value, and not be overlooked in our self-congratulation at the increase of our commerce. While it may be true that "trade follows the flag," it is equally true that commerce follows the ship.

The greatest advantage of the carrying trade, however, is probably the profit which it yields to the country which engages in it. Let us suppose that the average cost to an English vessel for carrying a ton across the Atlantic is \$10, and that the charge is \$12 per ton, a profit of \$2. There will be no question in this case of where the profit comes in. Suppose, however, that the cost of transporting a ton across the ocean in an American vessel were \$14, and that the charge was \$12, and a subsidy was granted amounting to \$5, so that the shipowner would get a profit of \$3 per ton. Would such an arrangement be profitable to the United States as a nation?

The answer would depend on several things which have not been mentioned. First, let us suppose that the supply of labor and capital in the United States is greater than can be profitably employed in land industries. In that case, the balance-sheet might be as follows:

A	
Value of supplies and materials used for which there would be no other demand.....	\$5 00
Value of supplies, etc., obtained abroad.....	2 00
Value of labor used for which there would be no other outlet.....	7 00
Return to capital directly invested.....	3 00

The figures used are for illustration only. The balance-sheet in the case of the English vessels might be as follows:

B	
Value of supplies, etc., purchased in the United States.....	\$2 00
Money paid out never to return.....	10 00

In the one case the country expends labor and material which would otherwise be unused, and loses little to outside parties, the money recirculating in the country and making business brisk. In the other case, the loss to the country is nearly complete, and there is no compensation, as business will feel the lack of employment of labor and non-use of the supplies which would otherwise have obtained.

Let us suppose, however, that the supply of labor can be profitably employed and that capital would have to be borrowed. The balance-sheet might be:

C	
Value of supplies and materials used for which there would be no other demand.....	\$5 00
Value of supplies, etc., obtained abroad.....	2 00
Value of labor used which would be worth as much in other enterprises—net value.....	.....
Return to managers of borrowed capital.....	1 50
Interest paid out of the country.....	1 50

A comparison of balance-sheets C and B would indicate a net value to the country on account of American ownership and management of \$3, as compared with the loss of \$10 in case of English ownership.

The only balance-sheet which could be imagined as showing no saving to the country on account of carrying its own commerce would be in case of such a dearth of labor that none could be spared from absolutely essential works in the country. Now, it is very evident that such a condition does not now exist in this country, and it is equally evident that there is no likelihood of such a condition ever arising, as that is a state of affairs which occurs only in the infancy of a country, or after a national calamity.

The spending of money in the country will be of benefit especially to the labor actually engaged in manning and operating the vessels to the extent that remunerative occupation could not be found for them in other



businesses within the country. As a country becomes more densely populated the opening up of new enterprises to give employment to labor, both skilled and unskilled, becomes of greater importance. It would appear that a merchant marine of some size, and growing with the growth of the country, would prove a very acceptable enterprise at the present time. A country having the advantages of as large a sea and lake coast as ours necessarily has a large section of the population interested in maritime matters. Besides, a certain proportion of the population of any maritime country naturally takes to the sea, and is not happy or suited with land occupations.

Then consider the advantages which will accrue from the preparation of the supplies and materials which are needed in connection with a merchant marine. It means more work for the coal miners, for the sawmills, for the iron foundries, for the copper smelters, for the steel mills and for a thousand industries which the average person hardly knows are in existence, so complex is our modern life and from so many sources do our ships draw for their building, equipment and supplies. Demand for additional output is the very cream of the causes which make for prosperity in any line of business. It not only makes for prosperity, but it makes for increased efficiency also. Improvements to plant and in methods come as the result of larger demand. Irregular and decreasing demand acts as a bar to progress.

The advantage to this country of doing its own carrying trade would be widespread, almost universal. Of course, the advantage to some sections would be greater than to others. But our lives are so interlinked that, even if the prosperity were confined primarily to one section, all the rest of the country would share it eventually. When cotton is at 10 cents it is not the South that benefits, because the South has more money to spend in paying its debts and in buying supplies. When wheat is at \$1.50 it is not only the West that benefits, because the West has more money to spend in paying its debts and in buying supplies. So, if the seacoast States would profit in largest measure from a merchant marine, the benefit would not stop there, but would permeate the whole country.

In the first Congress of the United States, as previously mentioned, when the greatest jealousy existed between the several States, we find that a tariff on manufacture was agreed to by the members from the South to the disadvantage of the people of their own States on account of the duty which they would have to pay for imported manufactured articles. The New England members, as an offset, agreed to a tariff on molasses, which they imported in large quantities for consumption and for manufacture into rum. Thus, both sections of the country contributed to the support of the Government, and manufactures received the encouragement which was needed to attract capital to invest in them. If this policy had not been adopted in the inception of our Government, there is no telling how our history would have been changed and how much our development would have been retarded. In this instance it was not necessary to grant a subsidy, but the effect was the same.

In the case of shipping the result may be accomplished in several ways:

- Suppose that we charge an additional duty on goods imported in foreign bottoms, to make up the difference between \$12 and \$17 in the example cited. The effect would be to raise the price of imported commodities and the subsidy would be paid in that manner.
- Suppose that we charge less duty on goods imported in American vessels, to make up the same difference. The effect would be to reduce the income of the Government, and the deficit would have to be met by an increase in the tariff, in rates of internal revenue or of income tax, and the subsidy would be paid in that manner.
- Suppose that we grant a direct subsidy at a certain rate per net register ton to all American vessels engaged in foreign trade sufficient to make up the difference in cost, as previously assumed. The deficit in the income of the Government would have to be met as in the previous case.
- Suppose that we grant a bounty on the articles exported in American vessels. The deficit in the revenues of the Government would have to be met as in previous cases.
- Suppose that a grant or subsidy be made for carrying the mail. This might serve to introduce a

few vessels into service, but would not solve the problem in a really satisfactory manner. The cost would be borne as in the case of a general direct subsidy.

There may be a thousand other ways of granting the necessary assistance, but all except the imposition of an additional duty on articles imported in foreign bottoms contemplate taking money from the general public to pay the subsidy or make up the deficit. The choice should be made so that the assistance may be granted in direct proportion to the need. This will prove no easy matter, but should depend on valuing the work done on the basis of average cost, just as railroad rates are now adjusted by the Interstate Commerce Commission, and on allowing a suitable subsidy over the freight rate charged to make the business sufficiently profitable to encourage the growth of a merchant marine.

As an example, take the case of a 5000-ton vessel trading between New York and London. Assume the cost of operating, including insurance, depreciation and interest on investment, as \$200,000 per annum. If the freight money received were \$140,000, then the subsidy should be \$60,000. By tabulating the result of the operation of all the various classes of vessels, a suitable rate of subsidy could be established which would be profitable for an efficient vessel and not profitable for an inefficient vessel. We do not want an inefficient vessel encouraged. The adjustment of the maximum freight rates and the corresponding subsidy on all classes of goods to and from all foreign ports might be the work of a commission acting under authority of Congress. If this plan be put into operation at once, and properly carried out, the title "American Merchant Marine" will soon represent an actuality, and not a dream.

Shipbuilding is an adjunct of the overseas carrying trade, just as the carrying trade is an adjunct of commerce. The commerce of the United States can be carried in foreign bottoms in the future just as it has been carried in the past. The loss to the country, however, is a serious one, and will be felt more and more as the density of our population increases, with the consequent rivalry with the densely populated manufacturing countries of Europe. We cannot afford any longer to pay our competitors for carrying on our commerce and allow them to absorb two dollars of profit to every one dollar that we gain. Such a policy continued for a long term of years will give our competitors so great a predominance that they will finally be able to control our industries completely, and leave us independent in name only. Indeed, it is probable that such control already exists to an extent which can be appreciated even now. The fact that we are a debtor nation is not due entirely to natural causes, but is due partly to the drain on our finances caused by paying other nations to do work which we should have been doing for ourselves.

Similarly, we can have a merchant marine without building the vessels in the United States. But such a procedure would be subject to the same disadvantages as above mentioned, only in a less degree. These disadvantages may be summarized as follows:

- Reduction of output of steel mills, collieries, cordage works, and the thousand and one industries which are called upon to furnish the materials and supplies used in shipbuilding and marine engine manufacture.
- Loss of work to the employees of the shipyards and marine engine builders.
- Reduction in number of plants capable of building and repairing naval vessels and their machinery.
- Reduction in the number of men capable of building and repairing naval vessels and their machinery.
- Loss of national prestige due to the effect of such a policy, and the lowering of the country on the scale of progress in scientific attainments. The adaptation of general scientific knowledge to meet the needs of marine construction constitutes one of the most important branches of mental endeavor, and has a reflex action on the progress and dissemination of science throughout the country. We may be a country of hay-seeds, and our national wealth may lie in great measure in our farms, but we Americans are not content to take second or third place in any branch of human endeavor if first place is open to us just for the trying.

The use which England is making of her shipyards and marine engine shops today to assist her in the endeavor she is making to retain her commercial supremacy as regards Germany shows how important an adjunct shipbuilding is to her assets. Mere money fails to buy what has no existence when time is lacking to

build plants and to train workers essential for its production.

This phase of the subject is one not lightly to be dismissed, as it meets all the requirements of an American merchant marine so far as retaining in the country the money which would be paid out to foreign carriers. Public operation is open to several serious objections, however, so soon as the character of the operations leads beyond the observance of fixed rules and requires the exercise of what is commonly known as business judgment. Inefficiency is sure to result, and the amount of subsidy paid out to cover the additional cost of transportation will be greatly increased on account of lack of efficiency in management. The five dollars previously considered will become at least ten dollars, with the consequent difficulty of distributing the advantages evenly in proportion to the burden of the increased taxation necessary to meet the larger subsidy.

### Increasing Tennessee's Zinc Output.

[Special Correspondence Manufacturers Record.]

Knoxville, Tenn., April 17.

The American Zinc Co. of Tennessee, located 12 miles east of Knoxville, is now building a \$75,000 addition to the present concentrating mill that will give the mill a capacity of 1800 tons of ore per day. This work has been authorized by the directors, and the addition to the present mill will be completed by July 1, that will give additional employment to men in the mill and the mines. Scientific estimates have been made, and the investigation shows plainly that the ores in the 2500 acres of land in Knox county will supply an 1800-ton mill per day for more than ten years, and it is impossible to estimate how much more ore may be developed in the future. The Masco mill when first erected was rated as having original mill capacity of 1000 tons daily, but the actual capacity under the management was 1150 tons daily. The addition will increase the daily capacity to 1800 tons of ore daily at the Masco mills. On this property the company has two mines. Each shaft has been sunk 2000 feet. Mine No. 1 is near the mill site and mine No. 2 is some distance away, but is connected with the mill by an overhead tramway, the length being 2000 feet. Another addition that has been completed since the erection of the first mill is a patent process and was developed on the Tennessee property known as the Oil Flotation Mill. In the concentrating of the ore there was a waste of small ore where it was impossible to secure the zinc from the stone. By this patent process the small stone is placed in vats and, with treatment of chemicals and oil, the zinc comes to the top and is lifted from the vats. This Flotation Mill, with its patent process, has been the means of taking up material that was thrown away and is netting the company \$400 per day in its operation and is adding to the output of the plant. The annual payroll for the company last year at its mills in Knox county was \$400,000. The additional capacity of the mill, which will be ready for operation by July 1, will greatly increase this payroll.

Tennessee zinc mines that have been properly developed have demonstrated the fact that, if not superior, they are the equal of the Joplin (Mo.) district, and the Knox county and Jefferson county mines, which are located just across the river, have an untold supply of this ore. Washington, Claiborne and other counties have rich deposits, but have not been developed.

### Variety of Products of One Plant.

Business Men's Club,

Paris, Tenn., April 16.

Editor Manufacturers Record:

We have just completed a plant in a building 90x180 feet and two stories, with basement, erected at a cost of \$8000. The capital stock of the company is \$25,000 paid in. This plant manufactures syrups, blend coffee, blend tea, breakfast food, macaroni and spaghetti sauce, pancake flour, peanut butter, salted peanuts, selected rice, tomatoes, sweet potatoes, extracts, pulverized nutmeg, grain black pepper, ground black pepper, grain spice, ground spice and mixed spice and a soft drink. About 20 people are employed in the factory.

LOUIS SPENCER DANIEL, Secretary.

# Commercial and Economic Phases of the Coal-Tar Situation\*

By HORACE C. PORTER.

Popular interest in coal tar is centered mainly in dye-stuffs and the other refined drugs and chemicals derived from it. The United States for commercial reasons has developed little manufacture of these products, and has been dependent upon European nations for the bulk of her supply.

In considering why this condition exists there must be borne in mind the fact that only a small part of coal tar (about 10 per cent.) can be made into drugs and dyes. The other 90 per cent., suited only for the manufacture of pitches and various heavy oils, forms the basis of an industry already well developed in the United States. Increased development of an industry based on only 10 per cent. of the tar or on 0.5 per cent. of the original coal must depend, in important measure, upon advantageous commercial disposal of the other 90 per cent. of the tar or the other 99.5 per cent. of the coal.

Coal tar, however, is not the only source of what are commonly known as "coal-tar" dyes and drugs. So-called "gas benzol," or light oil, which is abstracted from coal gas, and is, therefore, like tar, a by-product of the carbonization of coal, constitutes an important commercial source of these refined products. High-grade gas coal yields nearly 1 per cent. of "gas benzol" by weight, the value of which in the crude state is fully 20 per cent. of that of the coal; the light oil of tar, on the other hand, constitutes only 0.1 to 0.2 per cent. of the coal. "Gas benzol," unlike tar, has no constituents that cannot be utilized in the making of dyes and refined chemical preparations.

About 25 per cent. of the combined yield of tar and "benzol" may be made into the dyes, drugs and refined chemicals for which America has heretofore practically depended on Germany. The gross market value of these refined products made from the 25 per cent. portion is probably at least twice that of the pitch and heavy oils recoverable from the 75 per cent. portion. On the basis, therefore, of comparative values of products, the manufacture of refined "coal-tar chemicals" appears to be an exceedingly important offshoot of the coke and gas industry.

The United States has the raw material, namely, high-grade coal, in great abundance and of a kind well suited for making all the tar products consumed in the country. Commercial and economic conditions pertaining to the industry have prevented development of the manufacture of dyes and other refined products, but have fostered a well-developed industry in the manufacture of heavy tar oils and various pitches.

Light oil or "benzol," stripped directly from coal gas, is produced in this country in moderate amount. Exact statistics of output are not available, but an estimate based on certain reliable data places the production not utilized in gas enrichment by the producing company itself as under 4,500,000 gallons during the year 1913.

The possible production of "benzol," if the recovery process were applied to all the coal made into coke and gas in this country, would be over 100,000,000 gallons. New "benzol" recovery plants now being constructed in connection with by-product coke ovens will add probably 2,000,000 gallons to the annual production.

That in the immediate future all the coal gas or coke-oven gas manufactured will be made to give up its "benzol" for purposes of chemical manufactures is hardly to be expected. Benzene and its homologues are illuminating constituents of gas, and in many cities the maintenance of a minimum illuminating power for gas is required by State law. Therefore, at retort gas-making plants that furnish gas for municipal purposes the extraction of "benzol" from the gas is not likely to be introduced until the standard of illuminating power gives way to that of heating value. Such a practice would be entirely possible however if the demand for "benzol" should justify it, since illuminants derived from petroleum or other oils could be used to replace the "benzol." Owing to the steadily decreasing use of flat-flame jets and the increasing use of mantles the requirement of a minimum illuminating power for gas has

been already discarded in some States and will undoubtedly soon pass out of general use.

Not over 20 per cent. of the total gas made in by-product coke ovens in 1913 (about 150,000,000,000 cubic feet) was devoted to public lighting supplies, so that the remaining 80 per cent. could have been stripped of its "benzol" had a sufficient demand existed. It is to be noted that the entire make of gas at a coke-oven plant may profitably be stripped of its "benzol," although 50 to 60 per cent. of the gas may be returned for burning in the oven-heating flues. On the basis of the present tonnage of coal made into by-product coke the practicable total production of "benzol" from this source, at 1½ gallons per ton of coal, should accordingly be about 20,000,000 gallons yearly. This production would adequately supply the basic raw material for the aniline dyes and many of the refined "coal-tar products" consumed in this country. The content of pure benzene in the crude light oil stripped from gas is between 65 and 75 per cent.

The coke-oven operators have indicated their willingness to increase their production of "benzol" as the increasing demand from chemical manufacturers or other consumers justifies additional investment in plant.

The raw material for the coal-tar products consumed in America, omitting creosote oil, may be obtained in this country without great delay or unreasonable outlay of capital. It has been shown in the preceding paragraphs that an increase in the production of "benzol" from coal gas, involving only an extension of the recovery process to the existing by-product coke plants which do not sell illuminating gas, would, in conjunction with the present output of tar from coal gas and water gas plants, furnish the requisite raw materials. To supply the total creosote oil consumed an increased production of coal tar will be necessary, and an increased investment, therefore, in coal-carbonizing plants.

The establishment of chemical industries for the manufacture of dyes and other refined tar products in the United States will, however, depend upon a number of commercial factors. The uncertainty as to the duration of present conditions in Europe, and as to the resumption of ruinous competition at the hands of foreign manufacturers, causes American capital to hesitate in entering this field. Although raw material may be cheaply obtained, the risk of financial loss in the operation of such complex and highly specialized processes is a real barrier to the rapid introduction of dye manufacture in this country, or in any country other than the one where it is now well established, namely, Germany.

The Secretary of the Interior on September 3, 1914, called together in conference a number of the leading manufacturers of coal tar and chemical and pharmaceutical products for the purpose of determining what aid the Government could render in bringing about an American production of such coal-tar products as hitherto have been imported.

Two definite suggestions were made at this conference:

First, that a system should be instituted in this country whereby if a foreign patent is not used for manufacture within a reasonable time it will be open to use by American manufacturers.

Second, that a law should be passed whereby unfair competition through the practice known as "dumping" would be cut off. This practice, which is one of the most serious obstacles in the way of developing American manufacture of dyes and coal-tar drugs, consists of selling foreign products in the American market at an unreasonably low price. Since Germany's total exports of dyestuffs are more than five times the amount sent to the United States, the selling price of the portion sent to this country can readily be placed below cost as a temporary expedient.

German patents on many medicinal preparations preclude their manufacture in this country. On dyestuffs, however, not many American patents are now in force. About 25 per cent. of all the coal-tar dyes used are now patented in the United States, but practically all of those most commonly used, and the basic materials for their manufacture, such as crude aniline and alizarin,

are not now patented in this country. The patent laws, therefore, can hardly be said to be retarding seriously at present the development of an American dye industry. Their influence was undoubtedly felt at one time and may be of serious moment in the future, with respect to newly-discovered dyes.

At present the undeveloped state of the dye industry in America is rather to be ascribed to the great complexity of the industry, the continual changes in demand, the interdependence of many branches of the industry and the uncertainty of establishing one or more of these on a profitable basis without the support of the entire interlacing fabric, the complete interchange of materials and by-products, and the consequent lowering of costs. For this reason an American industry in these products must be expected to start slowly and in the beginning to bring small returns to the investors.

There seems to be much less uncertainty, however, as to the possibilities for some other manufactures, such as that of carbolic acid, picric acid and other nitro compounds, photographic developers, and some of the simpler drugs. Furthermore, the fact that for several years aniline dyes in considerable quantity have been manufactured in this country from imported aniline oil and crude intermediates indicates that the complete manufacture here of certain kinds of dyes is not an entirely hopeless undertaking. The preparation of crude aniline from benzene should not offer insurmountable difficulties, either technical or commercial; in fact, this product has been manufactured in a small way in this country for the last three years.

Any apparent shortage of coal tar at the present time, or any lack of an "open market" for obtaining it, is not likely to continue. The disposal of the available supply will adjust itself to the demand. The coal tar produced in the United States for a number of years has been consumed largely by one firm of manufacturers of tar products, but this fact in no way prevents producers of tar from selecting the most advantageous market for their product. Neither is there reason to believe that the present manufacturers of tar products and of benzol will fail to direct the raw materials toward more refined products, such as dyestuffs and drugs, when commercial conditions justify and demand the manufacture of these products.

## EAST TEXAS MINERALS.

### Possibility of Future Iron and Steel Development.

[Special Correspondence Manufacturers Record.]

Jefferson, Tex., April 17.

Reports continue of the development of the iron-ore lands in Marion and Cass counties, Tex., on a large scale, and with the vast amount of high-grade iron ores in these two counties so close to good railway and water transportation there is certainly good reason to look forward to this being accomplished. When this is undertaken by the right folks, in the proper manner, there is no doubt that there will be opened up in East Texas a large and profitable iron and steel industry.

The development of the oil lands in the eastern part of Marion county goes steadily and continuously on, and from present indications will result in the development of a very large and profitable field in the oil industry. So far the oils produced from the wells in this county have been of high grade, with a large per cent. of gasoline and kerosene, making it a ready seller at good prices for this section. Notwithstanding the business conditions, farmers generally are putting in full acreage this season, with a much reduced cotton acreage, and more corn and other feedstuff, and a notable increase in the things for furnishing the family table with the home product, which bespeaks better living and better times for the farmers. Our resourceful farmers have pulled through these trying times remarkably well, and with a fairly good season and a return of normal conditions will soon be in the usual prosperous condition.

G. W. BROWN.

Houston, Tex., business men have pledged tonnage sufficient to insure twice a month steamship service between their city and New York this year.

Assessed value of property in Missouri for 1915 is \$1,697,002,177, an increase of \$34,495,710 over that of 1914.

\*From Technical Paper 891, National Bureau of Mines.



## HYDRO-ELECTRIC DEVELOPMENTS OF THE SOUTHERN POWER COMPANY.



DAM AT 99 ISLANDS.



ROCKY CREEK STATION.



GREAT FALLS POWER-HOUSE.



LOOKOUT SHOALS STATION, UNDER CONSTRUCTION.

Announcement of the award of contract to the Hardaway Contracting Co. of Columbus, Ga., by the Southern Power Co. of Charlotte, N. C., for the construction of a dam and power-house at Falling Creek, on the Catawba River, marks an advanced step in the development of hydro-electric power in that region of the South. The accompanying illustrations are of three completed plants of the Southern Power Co. and of one in course of construction. The company will soon have available, with the completion of the Fishing Creek plant, horse-power approximating 200,000.

## American Iron and Steel Institute.

Among the papers thus far selected for the eighth general meeting of the American Iron and Steel Institute at New York on May 28 are:

"Blast Furnace Advancement," by Andrew E. Macoun, superintendent Edgar Thomson blast furnaces, Carnegie Steel Co., Braddock, Pa.

"Modern Merchant Steel Mills," by Jerome R. George, chief engineer Morgan Construction Co., Worcester, Mass.

"Corrosion of Steel," by Daniel M. Buck, chemist and metallurgist American Sheet & Tin Plate Co., McKeesport, Pa.

At the banquet in the evening the principal address will be one describing and illustrating the welfare work of the Tennessee Coal, Iron & Railroad Co. by Dr. Lloyd Noland, superintendent health department of that company. One or two additional papers will be determined upon in the near future, but the list of papers is intended to be shorter at this meeting than heretofore, while open informal discussion under the five-minute rule will be encouraged.

On April 29, 1915, the offices of the American Iron and Steel Institute will be removed from the Hudson Terminal Building, 30 Church street, where they have been for the last five years, to the 29th floor of the new Adams Express Co. building, 61 Broadway.

## What One Young Man Has Done.

Editor Manufacturers Record:

Following my article of some time back, in which I compared this, the boll-weevil district, to that of other sections of the South where the old cotton and credit system is still in vogue, I want to relate the history of a very small farmer, and one of the average planters who prior to the weevil was under the bondage of debt. Three years ago a farmer boy returned from college with his mind made up to give up an education and to farm. The first thing he did was to get married; then he bought 50 acres of land for \$400, all on a credit, and

proceeded to farm. This land was located 15 miles from any town. Within two years he paid for the place, and is now out of debt, and tells me he is making money as follows: He has one horse now; lost a mule last year. He cultivates about 18 acres of this land. His crop last year was as follows: First, his garden vegetables, chickens and eggs paid his living expenses. He made \$115 worth of corn, \$200 worth of peanuts, \$90 worth of hay; gathered 200 bushels sweet potatoes; killed 900 pounds of meat, all fattened on peanuts and potatoes. He has 9 head of cows, 20 head of hogs. Is growing onions, peanuts, syrup, hogs, chickens, etc., this year. He does not grow any cotton at all, and owes no man. The name of this uneducated boy, who started at the very bottom, is Homo Knight, R. F. D. 3, Liberty, Miss. I want someone who knows to tell me what per cent. of profit is this man making? Show me anything else that is doing the business this young man is. There is not a planter in all of the Mississippi Delta that can show the same profits, and is still making money. I repeat that Southwest Mississippi offers more to the poor man than any other place on earth. Now, to you who have not experienced the weevil, get ready for it by doing now what this young man has since he came here. I could relate many other stories giving greater gains than this, but this is one of the most poverty-stricken parts of the country, yet this is a true story. Land around this boy's place is worth \$4 or \$5 per acre. Can you beat it?

O. P. McPHERSON.  
Gloster, Miss.

## For Virginia Manganese Development.

The Powell's Fort manganese property in the Shenandoah Valley, 11 miles from Woodstock, Va., will be developed by H. P. Binswanger, 30 E. 42d street, New York. Mining will be under the supervision of J. Carson Adkerson, engineer, Lynchburg, Va., who has been connected with the Piedmont Manganese Corporation and its successor, the Oxford Mining and Manganese Corporation of Concord, Va. The Powell's Fort mine produced pyrolusite ore for many years, and is said to

comprise an extensive deposit of manganese existing in parallel veins for a distance of about two miles.

Planning to develop Virginia manganese properties, the Deerwood Manganese Mining Corporation of Lynchburg has been incorporated with an authorized capital of \$600,000. Officers as follows: President, Orin Kellogg of Minneapolis; vice-president, George Washburn of Villard, Minn.; treasurer, Wm. P. Smoot of Danville, Ill.; secretary, R. O. Morden of Minneapolis.

## The Laclede Coke Plant.

The Laclede Gas Light Co., St. Louis, is progressing with the construction of its big coke plant, upon which work was begun a year ago. It is estimated that \$2,000,000 will be the cost of land improvements, building construction, installation of machinery, etc., to complete this big enterprise. There are 56 ovens under construction, each oven 40 feet long by 19½ inches wide by 10 feet deep, of silica brick from Joliet, Ill. Other facilities include mud mixer, 1,000,000 cubic foot gas tank, electric power plant, two big tanks for coal tar, two others for ammonia, etc.

## Commodore Point Terminal Facilities.

Commodore Point property on St. John's River, Jacksonville, Fla., will be developed for terminal facilities, the land consisting of about one mile of deep-water front, with 100 acres back of the bulkhead line. It is owned by the Commodore Point Terminal Co., which has organized with authorized capital of \$900,000 to undertake the developments. Present plans contemplate bulkheading and filling in the land, constructing suitable docks, building warehouses, etc., to accommodate any industries requiring deep water and rail facilities. It is expected that the improvements will be completed within the next nine months. The company's officers are

as follows: A. G. Cummer, president; Archer S. Hubbard, vice-president and general manager; J. C. Cooper, Jr., secretary and treasurer.

### O'Hanlon Building, Winston-Salem.

Construction is progressing on the office and store building at Winston-Salem, N. C., for E. W. O'Hanlon of that city. The structure is 90x35 feet, nine stories, and will be fireproof, with concrete footings, Bethlehem columns and shapes, reinforced concrete floors and brick curtain walls. Mr. O'Hanlon will use the first floor



O'HANLON BUILDING, WINSTON-SALEM, N. C.

for his drug store, and the upper floors will be devoted to offices. The upper floors will have terrazzo corridors and the office floors will be laid in wood on cinder fill. The exterior of the first floor up to the level of the second floor will be of architectural terra-cotta, while the top floor, cornice and coping will also be finished with this material. The exterior will be faced with a rough texture red brick. Vault lights will be installed, together with revolving doors, plate-glass fronts on two sides, elevators, etc. Where there is any exposure the windows will be of metal sash, with wire glass. The building was designed by W. C. Northup of Winston-Salem, and the general construction contract awarded to the Travers Wood Co. of Richmond, Va., and Charlotte, N. C. It will cost approximately \$135,000. Contract for the structural steel was awarded to the Richmond (Va.) Structural Steel Co., and for the architectural terra-cotta to the Atlantic Terra-Cotta Co., New York. L. B. Brickenstein of Winston-Salem was awarded the contract for plumbing. An accompanying illustration presents a view of the building as it will appear when completed.

### First Aid for Kentucky Mines.

The fourth annual meeting of the Kentucky Mining Institute will be held at Pineville May 14-15. In connection with this meeting there will be a State-wide first aid meet. A large number of valuable prizes have been offered, among which are included various cash prizes aggregating \$100, mining lamps, a large assortment of wearing apparel, and large amount of groceries. It is probable that the American Mine Safety Association will offer medals to the teams having the highest average. The committee in charge is W. C. Tucker, chairman, Benham, Ky.; T. E. Butler, W. L. Moss and W. G. Duncan, Jr.

The industrial development committee of the Chamber of Commerce of Little Rock, Ark., has appropriated \$50,000 from its special fund to be used in maintaining a packet line to further navigation on the Arkansas River,

## Good Roads and Streets

### SOUTHERN HIGHWAY ACTIVITIES.

#### Details of Week's Progress in Improvements in City and Country.

Further details of road and street undertakings and bond issues mentioned below are given under the headings Construction Department and New Securities, published elsewhere in this issue. The MANUFACTURERS RECORD invites from its readers information about road and street work projected or under way, photographs of good roads and discussions of matters pertaining to the betterment of the highways of the South.

#### Bonds Voted.

Bakersville, N. C.—Mitchell county will issue \$30,000 bonds to construct roads in Grassy Creek Township.  
Chattanooga, Tenn.—Hamilton county will issue \$25,000 road bonds.  
Columbia, S. C.—Richland county has legislative authority to issue \$1,250,000 bonds for road improvements.  
Cuero, Tex.—De Witt County Road District No. 2 voted \$50,000 bonds to construct roads.  
London, Ky.—Laurel county voted \$100,000 road bonds.  
Stanley Heights, P. O. at Clarksburg, W. Va.—City voted April 21 on \$30,000 bonds to improve streets.  
Miami, Fla.—Dade county voted \$100,000 bonds to construct highway.  
Yadkinville, N. C.—Yadkin county will issue \$60,000 bonds for road construction.

#### Bonds to Be Voted.

Cuero, Tex.—De Witt county votes today on \$35,000 road-improvement bonds.  
Huntington, W. Va.—Cabell county votes May 22 on \$300,000 bonds to construct roads.  
Hallettsville, Tex.—Lavaca County Road District No. 1 (including Yoakum) votes May 5 on \$50,000 bonds to construct roads.  
Madisonville, Tenn.—Monroe county votes July 15 on \$300,000 bonds to construct roads.  
Nashville, N. C.—Nash county, North Whittakers Township Road District, votes May 15 on \$15,000 bonds for road construction.  
Newport, Tenn.—Cook county votes May 15 on \$200,000 bonds for road construction.  
Owensboro, Ky.—Davies county votes June 22 on \$600,000 bonds to construct roads.  
Port Lavaca, Tex.—City votes May 18 on \$17,000 bonds to macadamize, gravel or shell streets.  
Roxboro, N. C.—Person county, Roxboro Township, votes May 11 on \$75,000 bonds to construct roads.

#### Contracts Awarded.

Baltimore, Md.—City awarded \$5400 contract for sheet asphalt paving.  
Gate City, Va.—Scott county, which has issued \$300,000 bonds, awarded contract for road construction.  
Franklin, N. C.—Highway Commission awarded contract for 2½ miles of macadam paving.  
Goldsboro, N. C.—Mt. Olive Road District awarded contract to construct sand-clay roads, for which \$30,000 bonds have been issued.  
Greensboro, N. C.—City awarded \$87,000 contract for asphalt paving.  
Greensboro, N. C.—Irving Park county awarded contract for 8000 yards of concrete base and asphalt surface street paving.  
Houston, Tex.—Harris county awarded \$142,000 contract for asphalt paving.  
Jena, La.—State awarded contract for constructing five-mile road.  
Lawrenceville, Va.—Brunswick county awarded contract for constructing 17 miles of road.  
Lexington, Va.—Rockbridge county awarded contract for 2½ miles of macadam road.  
Marshall, N. C.—Madison county awarded contract for grading seven miles of road, etc.  
Selmer, Tenn.—City awarded contract for 7500 square feet of concrete sidewalk construction.  
St. Louis, Mo.—City awarded contract for grading, granite curbing and brick paving to cost \$57,000.  
Towson, Md.—Baltimore county awarded \$13,300 contracts for road construction.

Tuskegee, Ala.—City awarded contract for graveling two miles of streets.

#### Contracts to Be Awarded.

Baton Rouge, La.—City receives bids until May 15 for about 170,000 square yards of bituminous gravel paving, with concrete curb and gutter, subsurface drainage, etc.  
Belmont, N. C.—City will lay one mile of cement sidewalk.  
Cambridge, Md.—Dorchester county receives bids until May 11 for constructing two-mile shell macadam highway.  
Frederick, Md.—Frederick county receives bids until May 11 to build 1½-mile highway.  
Franklin, La.—St. Mary parish opens bids May 17 for constructing about 50 miles of gravel or shell and gravel surface highway.  
Hazlehurst, Miss.—Copiah County District No. 5 opens bids June 7 for constructing gravel roads; \$150,000 available.  
Lake Charles, La.—Calcasieu parish receives bids until May 4 for about 43 miles of grading.  
Lawrenceville, Va.—Brunswick county receives bids until April 26 to build 50 miles of soil roads.  
Lebanon, Va.—Russell county receives bids until April 23 for constructing 1½-mile highway.  
Linden, Ala.—Marengo county receives bids until May 11 for road construction to cost about \$4000.  
McKinney, Tex.—Collin county receives bids until June 7 for constructing 125 miles of highway.  
Nashville, Tenn.—City invites bids until April 29 to pave streets with wood block, bitulithic, granite block, concrete, bituminous macadam and bitustone; recently sold \$430,000 bonds.  
Parkersburg, W. Va.—City will expend \$87,500 for brick paving.  
Plymouth, N. C.—Washington county opens bids May 3 for rebuilding three-mile highway.  
Wayne, W. Va.—Wayne county, Ceredo District, receives bids until May 1 for constructing three-mile hard road.  
West Palm Beach, Fla.—City opens bids May 7 for 40,000 square yards of macadam pavement, 20,000 square yards of rock surfacing and 5544 cubic yards of grading.

### Dixie Highway Directors.

The directorate of the Dixie Highway Association, which proposes to establish a highway from Chicago to Miami, Fla., has been completed as follows:

Florida—G. W. Saxon of Tallahassee and S. A. Belcher of Miami.  
Georgia—W. T. Anderson of Macon and Clark Howell of Atlanta.  
Illinois—W. W. Murr of Springfield and Richard J. Finnegan of Chicago.  
Indiana—Thomas Taggart and Carl G. Fisher of Indianapolis.  
Kentucky—Harry Hanger of Richmond and Claude Mercer of Hardinsburg.  
Ohio—Harry Gordon, lieutenant-governor, and Geo. G. Harris of Cincinnati.  
Tennessee—Judge M. M. Allison of Chattanooga and A. M. Shook of Nashville.  
The Chattanooga incorporators are C. E. James, president of the association; W. R. Long, secretary; Richard Hardy, C. H. Huston, John A. Patten, Morris E. Temple and T. R. Preston.

### \$1,250,000 for Roads.

Richland county has received legislative authority for its recently announced proposed issuance of \$1,250,000 bonds for road improvements, and it is understood that the commissioners will give prompt attention to the necessary details. The county commissioners have their offices at Columbia, S. C., and anticipate making early announcements relative to the highway construction contemplated in connection with this bond issue.

### For Highway Construction.

Catalogues, estimates and other information on road construction, machinery, tools and materials are wanted by W. L. Waters and W. W. Robinson, both of Alexander City, Ala. Mr. Robinson has recently been elected



county commissioner of Talapoosa county. It is because of their official positions that they are interested in studying the latest improved methods and materials for the construction of highways.

### Bids for 50-Mile Road.

Bids for constructing 50 miles of soil road in Sturgeon district of Brunswick county, Virginia will be received until April 26 at the county clerk's office at Lawrenceville. Plans and specifications are on file at the clerk's office and with the State Highway Commission, G. P. Coleman, commissioner, Richmond.

### A \$142,000 Asphalt Paving Contract.

Among the large contracts awarded during the week was that of Harris county for \$142,000 worth of asphalt paving at Houston, Tex. This contract includes asphaltic concrete, and was awarded to the Eureka Paving Co. of Houston.

### A Segment Block Sewer Under Construction at Birmingham.

The accompanying photograph shows the first blocks that were laid in the lower half of the 48-inch segment block sewer, which was started March 17 under the supervision of L. H. Salter, county engineer for the Jefferson County (Alabama) Board of Revenue. The contractors are the Southern Asphalt & Construction Co., A. C. Brooks, superintendent, Birmingham, Ala.,



and these vitrified salt-glazed sanitary clay segment blocks are the product of the Southern Sewer Pipe Co. of Birmingham. This is the first segment block sewer construction in this territory. This line of 48-inch sewer takes care of all the sewage from Birmingham district, including Besemer, Ala., and is the outlet sewer from the new septic tanks being constructed by Jefferson county. The engineer and contractors seem to be well pleased with the quality of the segment block and this particular style of sewer construction. This 48-inch segment block sewer has just been completed.

### The Cotton Movement.

In the 259 days of the present season up to April 16, according to the report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, the amount of cotton brought into sight was 13,825,042 bales, a decrease under the same period last year of 319,708 bales. The exports were 6,888,638 bales, a decrease of 1,138,783 bales. The takings were, by Northern spinners, 2,398,125 bales, a decrease of 11,775 bales; by Southern spinners, 2,588,068 bales, a decrease of 190,872 bales.

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### United Railways of Baltimore.

The sixteenth annual report of the United Railways & Electric Co. of Baltimore shows that, in spite of the industrial depression produced by the war in Europe, gross earnings actually increased during the year 1914, although the effects of the hostilities were felt by the company in the latter part of the twelvemonth. The income statement displays the following results: Gross earnings \$9,203,839, increase as compared with 1913, \$157,347, or practically 1½ per cent.; operating expenses \$4,312,439, increase \$166,008, or 5 per cent.; net earnings from operation \$4,891,400, decrease \$8661; total income \$4,916,121, increase \$9115. There was an increase of \$37,358 in fixed charges, hence the balance after charges, \$1,951,295, displayed a decrease of \$28,243. The usual dividend was paid and the surplus remaining for the year was \$469,395, as compared with \$530,225 for the year before. This balance was carried to the credit of the depreciation reserve.

President Wm. A. House also says that the transportation facilities were materially increased by placing in service 85 new double-truck pay-as-you-enter cars of the semi-convertible type, and that the wages of the motormen and the conductors and of several other classes of employees were increased and a pension system was begun.

The total number of revenue passengers carried on the lines of the company was 185,296,350, increase 3,115,583; number of car miles run 30,250,194, increase 47,009; average earnings per car mile 30.43 cents, increase .48 of a cent; cost of service, exclusive of depreciation, etc., 14.26 cents, increase .53 of a cent; number of transfers used 77,102,879, increase 2,468,849, about 42 per cent. of the revenue passengers having used transfers. The company operates 404.6 miles of single track; net increase for the year, 1.1 mile. Of the entire mileage, 185.5 miles are laid with nine-inch girder rails and 168.6 miles with T rails, the latter being mainly upon suburban lines. With the exception of 1.4 miles laid with duplex rails, all the rest is laid with either seven-inch girder rails or lighter sections of the same type.

The total assets of the company as displayed by the balance-sheet are \$84,441,413, which includes the road and equipment and real estate at \$70,882,822.

At the annual meeting J. R. Aldred was elected a member of the board of directors to succeed Francis E. Waters, who retired.

### New Equipment.

Pennsylvania Railroad system will partly build and partly purchase for its Eastern lines 144 locomotives, 9745 freight cars and 146 all-steel passenger cars, and for its Western lines 50 locomotives, 6500 freight cars and 35 all-steel passenger cars. Most of the new equipment is for replacements.

Western Maryland Railway is expected to purchase passenger cars.

Pennsylvania Equipment Co., Philadelphia, is reported in the market for two second-hand locomotives, one a 45-ton 6-wheeled switcher and the other a Consolidation of 70 tons.

Austin (Tex.) Street Railway is reported about to buy 2 pay-as-you-enter cars.

### Petersburg to City Point.

The Petersburg & James River Railway Corporation, chartered in Virginia to build an electric overhead trolley line from Petersburg to City Point, about 11 miles, has effected a temporary organization with J. Walter Long, president; B. B. Wilson, vice-president, and Bester R. Walters, secretary and treasurer. Mr. Walters, however, will be continued in office when the permanent directors and officers are elected, which will not occur until the company has obtained a franchise to construct its railway along the county road. All of the gentlemen named reside in Washington, D. C., and Mr. Long's address is 801 Real Estate Trust Building in that city. It has not been decided when construction bids will be opened, but two small bridges will be needed near

Petersburg, the spans being about eight feet. Connection is to be made with the street railways there, and it is proposed to purchase electric current from the Virginia Power Co.

### Two Official Changes.

The Southern Railway Co. announces the retirement of S. H. Hardwick as passenger traffic manager, because of ill-health, and also his appointment as general agent of the passenger traffic department, with headquarters at Montgomery, Ala., his native city. He has been connected with the Southern Railway and its predecessors in continuous service in various positions for more than 40 years.

W. H. Tayloe has been appointed passenger traffic manager, succeeding Mr. Hardwick. He is a native of Richmond county, Virginia, and began his career in the service of the company and its predecessors as a stenographer. Since then he has filled the positions of passenger agent, general passenger agent, and latterly traffic manager of the Chesapeake Steamship Co.

### Pensacola to Mobile.

The Pensacola, Mobile & New Orleans Railroad Co., which is building a line from Pensacola to Mobile Bay at the mouth of Dolive Creek, whence ferryboats will provide connection with the city of Mobile, has, according to a report from the latter city, arranged financing to complete the road, which is now built for a distance of 27 miles as far as Loxley, Ala. While the company entertains plans to eventually enter Mobile upon its own tracks, to do so will necessitate the building of considerable trestle-work and a bridge at the Mobile River so that the utilization of ferry facilities is required temporarily. Henry McLaughlin of Pensacola is president of the company.

### Railroad Notes.

J. M. Dickinson and President H. U. Mudge have been appointed receivers for the Chicago, Rock Island & Pacific Railroad, according to a press report from Chicago.

The New Orleans Railway & Light Co. reports gross revenues from operation for the year 1914 at \$3,583,252.88, increase as compared with the previous year \$117,691; net income \$919,114.26, increase \$46,354.79.

The Pennsylvania Railroad Co. has let a contract to the American Wrecking Co. to raze a block of 55 old dwellings purchased by it several years ago for the purpose of adding to its freight yards in the heart of the city, which have become too small for traffic. Although the order for the demolition of the buildings has been given, the company does not say that it will begin construction of a yard addition soon.

The Arkansas & Memphis Railway Bridge & Terminal Co., which is building the so-called "Rock Island" bridge over the Mississippi River at Memphis, Tenn., has been authorized by the Missouri Public Service Commission to issue \$7,500,000 of bonds to complete the work. The railroad companies interested in the enterprise are the Chicago, Rock Island & Pacific, the St. Louis, Iron Mountain & Southern and the St. Louis Southwestern.

Construction of the electric railway which the Princeton Power Co. is building between Princeton and Bluefield, W. Va., is proceeding rapidly, and it is expected, according to reports from the locality, that the line will be in operation about the middle of summer. It will be 12 miles long, and will provide transportation facilities which have long been needed. About three-fourths of the distance are graded and ready for track-laying, which is to start May 1. S. J. Evans of Princeton is president.

The consolidation of several electric light and power plants on the Eastern Shore of Maryland and Delaware is expected to result in the building of an interurban electric railway, there having been rumors of such construction for several years. The companies merged are the Salisbury (Md.) Light, Heat & Power, the Cambridge (Md.) Gas & Electric, the Sussex Light & Power of Laurel, Del.; the Georgetown (Del.) Electric and the Milton (Del.) Electric Co. Jesse E. D. Price and Wm. M. Cooper of Salisbury are prominently interested.

## TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating

### Shiploads of Dyestuffs Released

In a cablegram dated April 13 the American ambassador at London states that a representative of the Textile Alliance, Mr. C. H. Burr, has received permission from the British authorities to make arrangements for moving two shiploads of dyestuffs from Germany to the United States via Rotterdam. The British Government will allow the vessels to pass without interference, provided: (1) That the vessels sail under neutral flags; (2) that shipments are made from Rotterdam, and (3) that the dyestuffs are consigned to Hon. William C. Redfield, Secretary of Commerce, for account of William A. Mitchell for distribution to the five associations comprising the Textile Alliance. The Textile Alliance is an organization composed of the National Association of Cotton Manufacturers, the American Cotton Manufacturers' Association, the American Association of Woolen and Worsted Manufacturers, the American Silk Association and the National Association of Woolen Manufacturers. The two cargoes referred to by the ambassador were paid for by the delivery of cotton cargoes shipped before March 1. Secretary Redfield has signified his willingness to act as consignee and will arrange for the distribution of the dyestuffs to the associations interested.

### Southern Cotton Mill Men.

It is understood that at next week's meeting in Boston of the National Association of Cotton Manufacturers will be considered a proposition looking to a union with the American Cotton Manufacturers' Association, which met last week at Memphis, Tenn. Though the former organization represents largely the textile interests of the New England and other States of the North and the latter those of the South, there is more or less community of membership in them, and has been for years. At Memphis the American Cotton Manufacturers' Association elected Scott Maxwell of Cordova, Ala., president; John A. Law of Spartanburg, S. C., vice-president; C. B. Bryant of Charlotte, N. C., secretary and treasurer, and Ceasar Cone of Greensboro, N. C., chairman; J. J. Bradley of Huntsville, Ala.; Eugene Holt of Burlington, N. C.; George E. Spofford of Augusta, Ga.; Paul J. Marrs of Henderson, Ky., and Craig & Mitchell of Philadelphia, Pa., members of the board of governors.

### To Build \$500,000 Addition.

Approximately \$500,000 will be invested by the West Point (Ga.) Manufacturing Co., Geo. H. Lanier, vice-president, to build an additional mill. This plant will include 20,000 spindles and accompanying machinery for manufacturing cotton duck. J. E. Serrine, Greenville, S. C., is the engineer, and will prepare plans, specifications, etc., with a view to immediate construction.

### Thomaston Cotton Mills.

The Thomaston (Ga.) Cotton Mills (lately noted to build a \$250,000 addition) has plans for building a two-story 400x130-foot mill structure with capacity of 25,000 spindles, 600 looms, etc., but only 15,000 spindles and complementary machinery will be installed at first. This company will also build a two-story 46x130-foot structure, in which it will install 3000 spindles. It has ordered the new machinery and contracted with the Central of Georgia Power Co., Macon, for 2000 electrical horse-power. In order to furnish this electricity

the power company is considering the erection of a transformer station and a transmission system from its Jackson hydro-electric plant to Thomasville via Barnesville.

### The Kyker Hosiery Mill.

J. W. Kyker, Newport, Tenn., has completed a 40x20-foot building for his hosiery mill. Fifteen knitting machines and other equipment to cost from \$3000 to \$4000 are being installed, to be driven at first by gasoline engine and later by electric power. No. 8 mixed yarn in black and white and blue and white and No. 7 white yarn are wanted.

### Textile Notes.

Sunny South Overall Co., Franklin, Va., contemplates installation of knitting machinery, and wants addresses of manufacturers of this class of equipment.

Harriman (Tenn.) Hosiery Mills will increase capital stock from \$76,000 to \$100,000 and increase daily capacity from 700 to 1000 dozen pairs of hosiery.

Amazon Cotton Mills, Thomasville, N. C., will, it is reported, build a large addition. This company's present equipment includes 12,000 ring spindles, electric-power drive, etc.

Standard Processing Co., Chattanooga, Tenn., will increase gassing facilities and winding capacity from 28,000 to 35,000 or more pounds weekly in connection with its addition (mentioned last week) at Ridgedale. Its new building will be of slow burning mill construction, two stories, 84x60 feet. Chandler & Chandler, Chattanooga, are the architects and contractors.

## MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

### Shooting Concrete With Compressed Air.

One of the interesting features of the construction work in connection with the building of two large drainage tunnels or sewers by the city of Memphis, Tenn., is the use of compressed air for mixing and conveying concrete through a pipe to place in the lining of the tunnel. These tunnels are 16 feet in diameter, and are excavated

in soft material. A shield is pushed forward a few inches at a time and the earth excavated and carried out in cars. Following the shield segments of hardwood are placed, forming consecutive rings which hold the earth from caving in. These wooden rings are, of course, merely temporary, and are used to hold up the ground until the concrete lining is placed.

The concrete lining is from 18 inches to 2 feet in thickness. To hold up this concrete until it has set, Blaw steel tunnel forms are used. When they are in place in the tunnel an eight-inch pipe is connected to them from the pneumatic concrete mixer and conveyor and the material forming the concrete, including cement, sand, gravel and water, is blown into the forms until they are completely filled. These forms are about 30 feet long, and the work of filling them requires about three or four hours.

This patented method of applying concrete is said to have reduced the cost of this class of work more than one-half, as formerly it was necessary to pack concrete into forms by hand, which was a slow and expensive process. It was used on the St. Louis water tunnel, and will be used on the Mill Creek sewer tunnel of St. Louis. The machines are leased and operated by the Concrete Mixing & Placing Co., 123 W. Madison street, Chicago, Ill.

### Big Mixing Plant Completed.

The Gulf Refining Co. has completed its big plant at Lynchburg, 22 miles below Houston, Tex., for mixing the heavy oils of Mexico with the lighter oils of Texas for use as fuel. Reports state that about \$750,000 has been invested and the plant has a daily capacity of 6000 barrels of oil. The plant occupies about 50 acres, and has been built on the unit system. It includes wharves for docking two ocean vessels at one time, 37,000-barrel receiving tank, power-house for loading ships, 55,000-barrel tank, two 20,000-barrel tanks, two 15,000-barrel tanks, mixing vats, power-house with two high power steam pumps, etc. Oil will be received at Lynchburg through a series of eight-inch pipes connecting with the trunk lines from the Oklahoma oil fields to Port Arthur, Texas.

The steamer Dixiana will be operated between Brunswick and Savannah, Ga., and northern ports of Europe, according to a report from New York, which announces her purchase (she was formerly the British steamer Putney Bridge) by E. D. Strachan of the Strachan Shipping Co. of Savannah and the formation of the Dixiana Steamship Co., Ltd., of London.



INSIDE OF TUNNEL, SHOWING PNEUMATIC MIXER AND CHUTE.



# Construction Department

## IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

### HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

### WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

### DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

### BRIDGES, CULVERTS, VIADUCTS

Md., Annapolis.—Maryland State Roads Com., O. E. Weller, Chrmn., 601 Garrett Bldg., Baltimore, Md., will repair timber bridge over Severn River on Annapolis Blvd. near Annapolis; require about 5000 ft. 12-in. by 12-in. timber and 8000 lin. ft. timber piles; contract No. 0270 B; bids until Apr. 27. (See Machinery Wanted.)

Md., Cumberland.—City Council adopted plans by B. H. Davis, Whitehall Bldg., 17 Battery Pl., New York, for bridge across Willis Creek at Market St., and receives construction bids until May 5; design calls for 2-arch construction of reinforced concrete; 22-ft. roadway, with curb, 6-ft. sidewalk on each side, ornamental concrete balustrade with 3 lamps, etc.; cost \$8000 to \$12,000; Jas. P. Gaffney, City Engr.; bridge lately noted. (See Machinery Wanted.)

N. C., Lexington.—Davidson county will build bridges in connection with road construction; erection mainly by county force; will buy steel direct and fabricate I-beam spans; R. T. Brown, Engr., Lexington. (See Road and Street Work.)

N. C., Germantown.—Stokes County Commissioners, Danbury, N. C., let contract Austin Bros. of Atlanta, Ga., at \$3933 to construct steel bridge across Buffalo Creek.

Okla., Chickasha.—Grady County Commrs., Chickasha, and Canadian County Commrs., El Reno, plan to construct bridge across Canadian River; length 1700 ft.; cost \$30,000 to \$35,000.

Okla., Tulsa.—Tulsa county voted \$200,000 bonds to construct concrete bridge across Arkansas River; Lewis Cline, County Clerk. (Lately noted.)

S. C., Chester.—Chester County Commrs. plan to construct steel bridge across Cane Fork Creek.

Tenn., Clinton.—Anderson county let contract to Vincennes Bridge Co., Vincennes, Ind., to construct lately-noted steel bridge at Clinton, Moore's Ferry and Edgemoor. (Bids previously mentioned.)

Tenn., Nashville.—Davidson County Bridge Com. employed F. E. Freeland of Freeland & Klyce Engineering Co., 65 Life & Casualty Bldg., Nashville, to prepare plans, specifications, cost estimates and to supervise construction of bridge across Cumberland River at Hydes Ferry; county authorized to issue \$250,000 bonds.

Tex., Kaufman.—Kaufman county, Justice Precinct No. 2 (Forney), will construct system of permanent bridges and roads; \$200,000 available; Road Commrs. receive bids until May 11; Jas. A. Cooley, County Judge. (See Machinery Wanted.)

Va., Petersburg.—Petersburg & James River Ry. Corp., Bestor R. Walters, Secy., 801 Real Estate Trust Bldg., Washington, D. C., will erect 2 small bridges near Petersburg on electric railways to be constructed from Petersburg to City Point.

Va., Richmond.—City let contract to Virginia Bridge & Iron Co., Roanoke, Va., at \$17,760 to repair 8 remaining old 100-ft. spans of 9th St. bridge across James River.

Va., Woodlawn.—Carroll County Commrs., Hillsville, Va., will construct steel bridge, with concrete substructure 120 ft. long, over Crooked Creek, near Woodlawn; bids at County Clerk's office, Hillsville, until Apr. 30. (See Machinery Wanted.)

W. Va., Elkins.—Randolph county, Thaddeus Pritt, Clerk, will receive bids until May 4 to construct previously-noted 7 bridges: Mill Creek bridge, bridge near Laban Currence's residence, Stone Gutter bridge, Kings Run, Isners Run, Stalnakers Run and Stone House bridges. (See Machinery Wanted.)

W. Va., Fairmont.—City, Anthony Bowen, Mayor, is considering \$400,000 bond issue for erection of two bridges; one across Coal Run, span of 388 ft., 95 ft. at highest point; other about 1450 ft., across Monongahela River, extending over tracks of B. & O. and of Buckhannon & Northern railroads; Mayor Bowen is Chrmn. of Com. to investigate and make reports as to character and cost, etc., of structures, and desires correspondence with engineers; inquiries may also be addressed to Chas. W. Evans, Secy. Chamber of Commerce. (See Machinery Wanted.)

### CANNING AND PACKING PLANTS

La., De Ridder.—G. W. Cline, Propr. De Ridder Steam Laundry, is reported to build cannery; daily capacity, 5000 cans; C. C. Chapman to supervise installation machinery.

Tex., Dallas.—Nelson Morris Packing Co. of Chicago and Oklahoma City is reported to build branch plant; cost \$60,000 to \$80,000.

### CLAYWORKING PLANTS

Ga., Athens.—Bricks.—Standard Brick Co., capital stock \$20,000, inctpd. by Billups Phinley, Harvey Stovall and J. T. Cooper.

Md., Frostburg.—Bricks, etc.—Mayer Bros. will rebuild brick plant burned in August at loss of \$20,000; install equipment to manufacture building and paving brick, hollow tile, etc.

Md., Hancock.—Bricks.—Hancock Shale Brick Co. will increase capital stock from \$30,000 to \$40,000. (Lately reported to build kiln with capacity 135,000 bricks.)

### COAL MINES AND COKE OVENS

Ky., Wayland.—Porter-Preston Coal Co., Paintsville, Ky., leased boundary of coal land 2 mi. from Wayland and will develop.

Ky., Ashland.—Crystal Block Collieries Co., J. W. M. Stewart, Prest., reduced capital stock from \$150,000 to \$60,000; recent statement of increase was incorrect; leased properties (as noted in Manufacturers Record Oct. 29, 1914) to East Kentucky Coal Co., C. A. Gent, Prest., 317 Fisher Bldg., Chicago, Ill.

Okla., Henryetta.—Atlas Coal Co., capital stock \$5000, inctpd. by H. P. Stewart, J. W. Mills and S. R. Taylor.

W. Va., Lowville.—Lehigh Coal Co., Cleveland, O., is equipping plant to develop 150 acres; daily capacity 1200 to 1500 tons; machinery partly purchased; tippie and fan not yet bought; Monongahela Valley Engineering Co., Construction Engr., Morgantown, W. Va.

W. Va., Grant Town.—Federal Coal & Coke Co. let contract to sink shaft; 360 ft. deep; cost about \$30,000.

### COTTON COMPRESSES AND GINS

Ala., Attalla.—J. H. Arnold & Co. are reported as contemplating erection of cotton compress at Attalla or Gadsden; cost about \$25,000.

Ala., Birmingham.—Glinners' Utility Co., capital \$24,000, inctpd.; T. H. Spencer, Prest.; W. M. Spencer, V.-P.; G. C. Stacy, Secy.-Treas.

Okla., Bristow.—C. C. Epps (lately noted to install additional machinery) is enlarging 1-press mill to 4-press mill; plant complete cost \$50,000; contemplates installing peanut machinery; will enlarge concrete buildings, Mr. Epps superintending construction; machinery to be installed includes 4 Anderson oil expellers, 6 blenders and 5 80-saw gins; products, crude cottonseed oil and cold pressed cottonseed cake.

Okla., Lexington.—Farmers' Co-operative Gin Co. (lately noted inctpd., capital stock \$6000) organized; C. J. Williams, Prest.; J. P. Garrett, V.-P.; Ed Low, Secy.-Treas.; operates cotton gin of 50 bales daily capacity; machinery installed.

Tenn., Dyersburg.—White Gin Co., capital \$5000, inctpd. by J. K. White, W. E. McGenie, J. C. Davis and others.

Tex., Cumby.—C. Y. Fry will build gin.

Tex., Lubbock.—R. C. Malone is reported to build 4-stand gin with cleaner and boiler attached.

Tex., Lubbock.—W. R. Vaughan of Quanah, Tex., is reported to build gin.

Tex., Yorktown.—Theo. Rogge of Shiner, Tex., will build gin.

### COTTONSEED-OIL MILLS

Ga., Augusta.—Cottonseed Oil Co., Richard F. Hoyt, Prest., Boston, Mass., has contracted with American Machine & Mfg. Co. of Greenville, S. C., for engineering, construction and complete equipment of 6-press cottonseed-oil mill; main mill building to be 1 story; brick; standard mill construction; concrete floor; composition roof; seed and hull houses to be of standard construction; Gallivan Building Co. of Greenville, S. C., has contract to erect buildings; cost \$125,000 to \$150,000.

Tenn., Covington.—Covington Cotton Oil Co., capital stock \$125,000, inctpd. by Norman H. Murphy, M. L. Keathley, John Dearing and others; acquires Phoenix Cotton Oil Co.'s mill and ginneries in Covington and Tipton counties.

### DRAINAGE SYSTEMS

Ark., Lake City.—Drainage Dist. No. 9 bonds (\$225,000) lately noted sold for construction of drainage system, are applicable to drainage of this district, contract noted and details described in Manufacturers Record June, 1914; J. P. Karr, Contr., Fort Wayne, Ind.; drains 38,000 acres in Craighead county for agriculture.

La., Estherwood.—Fifth Ward Drainage Dist. No. 1 will dredge about 25 mi. gravity drainage canals; estimated 200,000 cu. yds. excavation; Drainage Commrs., Ellis Hoffpaul, Prest., invite bids until May 15. (See Machinery Wanted.)

La., Jennings.—Commrs. Grand Marais Sub-Drainage Dist., Chas. E. Elber, Secy., let contracts for canal construction to drain 10,000 acres land; estimated cost \$100,000; contractors as follows: Lake Arthur Dredging Co., Beaumont, Tex.; Hudson-Nichols Co.; G. B. Zigler Co.; both of Jennings. (Lately noted.)

Tenn., Dyersburg.—Reeds Creek Drainage Dist., Dyers county, will construct about 15.4 mi. ditches; about 600,000 cu. yds. earth excavation; floating-dipper dredge work; bids received May 14; Morgan Engineering Co., Engr., Memphis, Tenn. (See Machinery Wanted.)

Tex., Anahuac.—Hankamer Drainage Dist. No. 2 of Chambers county will construct drainage system; issued \$8000 bonds.

Tex., Edinburg.—Commrs. Hidalgo County Drainage Dist. No. 1, Geo. B. Meriwether, Chrmn., will construct ditch and levee and improve watercourse known as the Cholo from point in Porcion No. 57, running eastwardly across Porciones numbered 58, 59 and 60 to point in Porcion No. 61, comprising about 90,000 cu. yds. dirt work; bids until May 17; Engr., C. S. Clark, Donna, Tex. (See Machinery Wanted.)

### ELECTRIC PLANTS

Ark., Blytheville.—Southwestern Utilities Co. increased capital stock from \$425,000 to \$500,000; controls power plant in Blytheville and similar plants in several Missouri cities.

D. C., Washington.—Potomac Electric Power Co., 14th and C Sts. N. W., authorized issue and sale of \$79,500 general improvement bonds; schedule approved includes cost of extension of underground conduits for street and park lighting, \$7282.24; extension of underground cables for same, \$24,262.65; additional street lamps, \$6715.21, and for extension to street-lighting system for 1915, \$42,000.

Fla., St. Petersburg.—General Utilities & Operating Co., 1423 Munsey Bldg., Baltimore, Md., purchased St. Petersburg Light & Power Co.'s plant; will expend \$50,000 for improvements.

Ga., Atlanta.—Georgia Electric Co., capital stock \$5000, inctpd. by B. O. Bittick and W. M. Bennett.

Ga., Toccoa.—City votes May 12 on \$35,000 bonds to construct electric-light plant; Claude Bond, Mayor. (Noted in January.)

Ky., Elizabethtown.—Greenup Electric Co., capital \$10,000, inctpd. by Geo. H. Greenup, L. L. Greenup and L. J. Metcalfe. (Lately noted under Ky., Stithon.)

Ky., Hustonville.—Walter Owsley is reported to have purchased local electric-light plant; erecting power-house; purchased and will install additional 25 H. P. engine.

Ky., Hazard.—Hazard Power Co. (L. L. Stone and others) is reported to have acquired electric-light plant, to improve and operate. (Lately noted inctpd. with \$25,000 capital.)

Md., Myersville.—Hagerstown & Frederick Ry., H. B. Baird, Elec. Engr., Hagerstown, will install substation at Myersville.

Md., Salisbury.—Salisbury Light, Heat & Power Co. of Salisbury; Cambridge (Md.) Gas & Electrical Co., Georgetown (Del.) Electrical Co., Milton (Del.) Electrical Co. and several smaller lighting and power companies have consolidated with \$1,000,000 capital stock.

Mo., Hume.—Hume Electric Co. contemplates constructing 17 mi. transmission lines to supply farming community with electricity for lamps and motors.

Mo., Kearney.—Kearney Electric Co. contemplates extending transmission line to town about 6 mi. distant; John A. Eby, Mgr.

Mo., Springfield.—Heer-Andres Investment Co. is reported to construct power plant to supply electricity to its mercantile store; cost \$25,000 to \$30,000, of which \$18,000 will be expended for electrical equipment; A. N. Torbett, Archt., is preparing plans.

Mo., Ulrich.—City is reported as having plans prepared for electric-light plant; cost \$500. H. Busse is interested.

N. C., Laurinburg.—Yadkin River Power Co., Raleigh, N. C., is reported to build retraction plant in Laurinburg and furnish electricity for lighting and power in Laurinburg, Maxton and Lumberton.

Okla., Hugo.—Hugo Ice & Light Co. plans to install 500 K. W. turbine-driven generating unit with condenser and auxiliaries and 60 H. P. water-tube boiler; let contracts for equipment.

S. C., Bethune.—McBee Electric Co., McBee, S. C., will install electric system; includes 8 mi. No. 6 and 8 mi. No. 4 copper wire; asks prices on wire and other materials. (See Machinery Wanted.)

S. C., Dillon.—Electric Light and Water Comms. contemplate purchasing 30-K. W. 2-phase 60-cycle 2300-volt generating unit directly connected; W. H. Crow, Supt.

Tenn., Memphis.—City voted \$1,500,000 bonds to buy or build municipal electric light and power plant; will appoint special committee to determine whether to build or buy plant of Memphis Light & Power Co.; J. H. Weatherford, City Engr. (Lately noted.)

Tex., Haskell.—Haskell Ice & Light Co. (W. G. Swenson of Abilene, Tex., and others) acquired electric-light plant and will remodel. (See Ice and Cold-storage Plants.)

Tex., Lampasas.—Lampasas Light & Power Co. contemplates installing 50 K. W. 3-phase generator and complete set of ceiling and desk fans.

Tex., Marfa.—B. Q. Musgraves of Fort Worth and others are reported to build electric plant in connection with electric railway.

Tex., McKinney.—City is reported as contemplating purchase and installation of 200 K. W. 2-phase 60-cycle 2300-volt generating unit, directly connected. Address The Mayor.

Tex., Palacios.—Chas. H. Trego, owner of local electric plant, is installing 60 H. P. oil engine of semi-Diesel type, and will install 30 K. W. or 40 K. W. alternating-current generator during summer; when improvements are completed will discard steam plant.

Tex., Seguin.—Seguin Electric Light & Power Co., O. A. Gafford, Mgr., has plans and will ask bids in about 30 days for lately-noted rebuilding of power plant.

W. Va., Huntington.—Lincoln Coal Mining Corp. will install generating plant at Big Creek; has let contract.

## FERTILIZER FACTORIES

Ga., Cartersville.—Bartow County Fertilizer Co. will establish mixing plant; specifications prepared for building.

Tenn., Chattanooga.—Hooper Limestone Co. contemplates improving and enlarging plant; purchased 8½ acres limestone land upon which plant is located.

## FLOUR, FEED AND MEAL MILLS

Ala., Marbury.—Farmers' Flour & Mill Co., capital stock \$10,000, organized; build mill with daily capacity 25 bbls. flour.

Ark., Mosley, R. F. D. from Chickalah.—C. E. Tilmon is reported to build flour mill.

Ark., Nashville.—Howard County Farmers' Union, S. A. Lewis, Pres., is reported contemplating erection of flour mill.

Ky., Fulton.—Fulton Flour-Feed Dealers & Mfg. Co., capital \$12,000, incptd. by Chas. Noonon, N. B. Hester, C. E. Hutcherson and John H. Aferitt.

S. C., Kathwood.—Kathwood Milling Co., capital stock \$1500, incptd.; C. C. F. Hammond, Pres.; E. P. Dick, V.-P.; J. H. Murray, Secy.-Treas.

Okla., Oklahoma City.—Oklahoma Feed & Milling Co., capital stock \$30,000, incptd. by A. S. Dolezal, E. G. Fisher, J. D. Frisbie and F. A. Wheeler.

Tex., Chillicothe.—Orient Milling Co., recently noted as to increase flour mill capacity from 250 to 400 bbls., purchased Ruth-erford Mill and Elevator; additional machinery purchased; Frank Kell, Pres. of Orient Co.; J. J. Perkins, V.-P.; A. W. Faris, Secy.-Mgr.

Tex., Vernon.—Kell Milling Co. will make improvements to plant costing \$33,000, in-

cluding new machinery, 125,000-bu. steel and concrete elevator and 5000-bbl. flour warehouse; increase daily capacity from 250 to 500 bbls.

Tex., San Antonio.—J. A. Graham, Box 424, will establish flour mill of 50 to 100 bbls. capacity; also install feed-grinding machine; will need machinery. (See Machinery Wanted.)

## FOUNDRY AND MACHINE PLANTS

Md., Baltimore.—Gasoline Engines.—Hall-Seeley Motor Corp., 400 Continental Bldg., contemplates building gasoline engine works; now demonstrating special-design marine motor; company was incptd. (in 1913) with \$1,000,000 capital stock by Milan W. Hall, C. Ford Seeley and Francis D. Buck.

Md., Baltimore.—Bottling Machinery.—Carper Automatic Machine Co. incptd. with capital stock \$500,000 to manufacture automatic bottling machines; Henry L. Brack, Pres., 327 St. Paul St.; Albert E. Carper, Mgr., 1710 Patapasco St.

Mo., St. Louis.—Locomotive Ashpan.—Cast Steel Locomotive Ashpan Co. incptd., capital stock \$10,000, by H. M. Pfleger, Arthur T. Morey and Fred W. Dieckmann.

Okla., Oklahoma City.—Machinery.—Corken-Hooton Machinery Co., capital stock \$6000, incptd. by O. K. Corken, W. L. Hutcheson and C. A. Hooton.

Okla., Okmulgee.—Harrows.—Luster Mfg. Co. incptd., capital stock \$12,000, by M. C. Luster, Box 107, Okmulgee, and others; J. P. A. Deck, Pres.; J. R. Ashley, V.-P.; A. R. Bradshaw, Secy.-Treas.; will produce patented harrow, to be manufactured at present in local shops; contemplates building and equipping factory later, probably in Okmulgee.

Okla., Tulsa.—Iron Works.—Oklahoma Iron Works reported as having plans prepared for additional building; 25x74 ft.; fireproof; electric power to operate machinery.

S. C., Charleston.—Gas Engines, etc.—Gas Engine & Electric Co., capital stock \$6000, incptd. by H. Stevens White, A. D. Wall and J. M. Frampton.

Tenn., Memphis.—Cotton Pickers.—Southern Cotton Picker Co., capital \$30,000, will be organized by Geo. Pryor, T. E. Johnston, Will Dockery and others; to manufacture cotton picker invented by L. C. Stukenborg, 726 Looney St.; company is reported to have contracted for exceeding \$100,000 worth of materials for manufacturing.

Tex., Fort Worth.—Cotton Cleaning Machine.—E. E. Dickerson is reported to build \$40,000 plant at 14th and Commerce Sts. to manufacture patented cotton cleaning machine.

## GAS AND OIL ENTERPRISES

Ark., Camden.—Oil Products.—Arkansas Oil Products Co., capital \$25,000, incptd. by Geo. S. Kimball, J. E. Newton, W. F. Corcoran and J. W. Crotty.

Fla., Arcadia.—Gas Plant.—J. L. Jones, care of DeSoto Abstract Co., and associates received gas franchise for which they were recently noted as applying; will need machinery. (See Machinery Wanted.)

Fla., Jacksonville.—Gas Plant.—Jacksonville Gas Co. will build gas container; capacity 250,000 cu. ft.; arranged to provide for future enlargement increasing capacity to 500,000 cu. ft.; estimated cost \$25,000.

Ky., Scottsville.—Dixie Oil Co., capital \$3000, incptd. by E. W. Cooper, F. E. Bradley, C. A. Calvert and H. L. Hendrick.

La., Alexandria.—Lockwood Oil Co., capital stock \$25,000, incptd.; Wm. P. Hayne, Pres., Boyce, La.; G. W. Zoder, V.-P.; W. D. Hill, Secy.-Treas., both of Alexandria.

La., Alexandria.—Chas. T. Madison of Shreveport is reported to submit proposition to city to furnish oil and gas through pipe line from Crichton oil fields; estimates cost of laying 4-in. pipe line 70 mi. at \$100,000 for oil line and \$150,000 for gas line.

La., Crichton.—Royal Petroleum Co., capital \$50,000, organized; owns leases on 80 acres in Red River oil fields and will develop; W. W. Whittington, Jr., Pres.; T. R. Hince, V.-P. and Gen. Mgr.; W. D. Hill, Secy.-Treas., all of Alexandria.

La., New Orleans.—Point Pleasant Oil Co., 204 Weis Bldg. (lately noted incptd., capital stock \$30,000), D. A. Walsh, Pres., contemplates development; will soon need piping, driller, drilling machinery and an expert geologist. (See Machinery Wanted.)

Miss., McComb.—Oil Distributing Plant.—Globe Oil & Refining Co. is reported to establish distributing plant; erect oil tanks, etc.

Okla., Ada.—Ada Oil & Gas Co. (Skelly & Sanky) applied for municipal gas franchise; city votes May 13 on proposition.

Okla., Ardmore.—Gas Plant, etc.—J. L. Hamon will build gas plant; H. D. Huldebrand and J. L. Lindsay, Pres. and Engr., respectively, of Hope Engineering & Construction Co., Pittsburgh, Pa., are making estimate on construction of gas plant in Ardmore and pipe line to Ringling; will also make test of gas, and if gasoline can be manufactured from it, Mr. Hamon will also build gasoline plant.

Okla., Coalgate.—Cairo Oil Co., capital stock \$30,000, incptd. by F. G. Stebbins of Oklahoma City, J. G. Fry and A. B. Patterson of Dallas, Tex.

Okla., Muskogee.—Madeline Oil & Gas Co. incptd. by W. L. Varner, David Kinsey, Thos. C. Carlos and J. W. Brown.

Okla., Tulsa.—Avalanche Oil Co., capital stock \$5000, incptd. by M. King, A. A. King and H. S. Patterson.

Okla., Tulsa.—Oil Products.—Coleman Oil Products Co., capital stock \$10,000, incptd. by E. A. Coleman, C. E. Dennett and D. C. Acosta.

Tenn., Cleveland.—Gas Plant.—City Council granted gas franchise to Chattanooga Gas Co., S. E. De Freese, Mgr., Chattanooga; build plant estimated to cost \$65,000. (Noted in Feb.)

Tenn., Johnson City.—Gas Plant.—Washington County Gas Co., capital \$300,000, incptd. with B. G. Appleby, Pres., Saginaw, Mich.; will build plant in Johnson City; lay 22 mi. of mains, installing high-pressure gas system; let contract for construction to American Gas Construction Co. of Newton, O.; construction to be in charge of R. B. Wagner of Grand Rapids, Mich.; also plans to extend lines to Jonesboro and Elizabethton. (City reported in Nov., 1914, to have granted franchise to Wagner & Dunn to build gas plant costing about \$100,000.)

Tex., Coupland.—Coupland Oil Co., capital stock \$10,000, incptd. by W. C. Turnbow, Ambrose Merchant and J. L. Brown.

Tex., Corpus Christi.—We-See Oil Co., capital stock \$10,000, incptd. to develop 400 acres in Corpus Christi oil field; C. G. Hamill of Bay City, Tex., to be in charge.

Tex., Sour Lake.—R. M. Means Oil Co., capital stock \$12,000, incptd. by R. M. Means, Joe Gordon and J. F. Swift.

Tex., Taylor.—Security Oil & Gas Co., capital stock \$4000, incptd. by Walter H. Reit, W. H. Smith and Alfred Schmidt.

Va., Clifton Forge.—Texas Co., Houston, Tex., is reported to establish branch plant; erect tanks, offices, etc.

W. Va., Branchland.—Columbia Gas & Electric Co., J. P. McCloskey, Supt., is reported to expend about \$30,000 repairing trunk lines to Western towns; now drilling 12 wells in Branchland field and plans to drill 30 more.

## ICE AND COLD-STORAGE PLANTS

Ala., Lockhart.—Jackson Lumber Co. will build ice plant to have daily capacity of 15 tons and 40-ton cold-storage plant; 9 rooms; has let contracts for construction and equipment.

Fla., Lake City.—Bond Trustees voted to install municipal ice plant; C. J. Ryan, Mgr. electric-light and water plant, will superintend installation of machinery ordered from Carbondale Machinery Co. of Carbondale, Pa.

Fla., Melbourne.—Wm. T. Wells is interested in plan to build ice factory.

Ky., Bedford.—Thurman L. Jenkins will install lately-noted plant at Milton. (See Ky., Milton.)

Ky., Milton.—Thurman L. Jenkins will install 5-ton ice plant; has building. (See Machinery Wanted.)

Md., Baltimore.—C. D. Cooley Co., Pittsburgh, Pa., is reported as Archt.-Engr. for large cold-storage plant.

Miss., Gwin (not a Postoffice).—E. H. Dameron, Jackson, Miss., is constructing ice plant.

Mo., Crocker.—Crystal Ice & Bottling Co., capital \$15,000, incptd. by E. F. Carver, J. H. Turpin and J. E. Turpin.

Mo., Stockton.—Stockton Ice Co., capital stock \$4200, incptd. by A. Willsie, J. W. Craig and W. C. Bryson.

N. C., Rockingham.—Rockingham Ice Mfg. Co., W. F. Long, Jr., Box 745, Portsmouth, Va., Pres., will incorporate to establish ice plant of 15 to 25 tons daily capacity. (See Machinery Wanted.)

Okla., Custer.—City, O. H. Parker, Mayor, purchased machinery for lately-noted 10-ton plant; H. H. Hatchett, Supt.

Tenn., Columbia.—W. J. and J. F. Rushton of Birmingham, Ala., are reported to erect 30-ton duplicate ice plant; cost \$40,000 to \$50,000.

Tenn., Jackson.—Wm. C. Freeman, general delivery, Jackson, is organizing company to establish ice and cold-storage plants in South and West; proposes also to purchase such plants or plants combined with lighting systems and gas works in small towns.

Tex., Haskell.—Haskell Ice & Light Co. (W. G. Swenson of Abilene, Tex., and others) acquired ice, electric light and bottling plant at Haskell and will remodel. (Lately noted incptd. with \$20,000 capital stock.)

Va., Roanoke.—Citizens' Crystal Ice Co., G. W. Chaney, Secy.-Treas., is having plans prepared by Geo. W. Hutchinson for ice plant to have initial capacity of 60 tons. (Further facts lately noted.)

## IRON AND STEEL PLANTS

Ky., Louisville.—Sheet Mill.—Louisville Steel & Iron Co. is being reorganized by Geo. H. Holzbog, Jeffersonville, Ind., and associates; plans first to operate mill for manufacturing steel and iron sheets; later to operate bar mill.

Va., Low Moor.—Iron Furnace.—Low Moor Iron Co. of Virginia, E. C. Means, Pres. and Gen. Mgr. (lately reported to blow in iron furnace), will resume operations of the several properties in Virginia and West Virginia; now operating 1 ore mine and preparing for early operation of another; will blow in largest of company's 3 iron furnaces (Low Moor furnace). It having rated capacity of 350 tons foundry iron; also prepare other 2 iron furnaces for resumption and coal mines in West Virginia for increased output.

## LAND DEVELOPMENTS

Ark., Moro.—Moro Special School Dist. issued \$12,000 bonds to purchase land for agricultural purposes; Paul Westbrook, Secy.

Fla., Sarasota.—Southern Investment Co., T. C. Williams, Gen. Mgr., will develop 87,000 acres land; general plan is to clear and subdivide land into 10-acre tracts, erect dwellings and drill wells; B. C. Bruce, J. W. Philip and other engineers are making surveys; will have sales offices in Columbia and Spartanburg, S. C.

Fla., Wauchula.—Wauchula Co., capital stock \$1,200,000, incptd.; H. Vandolah, Pres. and Gen. Mgr.; J. A. McInnis, Secy.; Maxwell Baxter, Treas.

Ky., Louisville.—Glendear Farm Co., capital \$30,000, incptd. by C. C. Matthis, R. C. Barge and Rush R. Weber.

N. C., Waynesville.—Haywood Orchard Co., capital \$100,000, incptd. by S. J. Phillips of Asheville, N. C.; N. F. Thompson of Birmingham, Ala., and others.

Okla., Oklahoma City.—Choctaw Frisco Land Co., capital stock \$10,000, incptd. by John F. Walls, W. V. Buckner and J. H. Hickman.

Tenn., Chattanooga.—East Mission Heights Land Co., capital \$10,000, incptd. by Hubert Bushnell, E. B. Ogden, H. C. Hulise and others.

Tenn., Chattanooga.—East Mission Heights Land Co., capital stock \$10,000, incptd. by Herbert Bushnell, E. B. Ogden, H. C. Hulise and others.

Tenn., Tullahoma.—Nashville, Chattanooga & St. Louis Ry., H. McDonald, Ch. Engr., Nashville, has agreed to give to city grove at Atlantic and Grundy Sts.; company proposes to construct 12-ft. concrete walk entirely around park, erect fountain, bandstand, etc., and furnish landscape architect; city will maintain park; T. D. Lawson, John W. Horton and others appointed Park Comms.

Va., Norfolk.—Commercial Land Co., capital stock \$25,000, incptd.; Perry W. Ruth, Pres.; C. Moran Barry, Secy.-Treas.

Va., Norfolk.—Pigeon Hill Farm Corp., capital stock \$25,000, chartered; C. F. Pretlow, Pres.-Treas.; S. W. Butler, V.-P. and Secy.

Va., Richmond.—East Highland Park Corp., capital \$60,000 incptd.; L. B. Whitley, Pres.-Treas., Norfolk; W. F. Redd, V.-P., and J. B. Blackburn, Secy., both of Richmond.

W. Va., Barboursville.—Oaklawn Cemetery Co. organized with S. G. Johnson, Pres.; H. E. Love, V.-P.; P. A. Vallandigham, Treas.; H. C. Melrose, Secy.; purchased land and will develop for cemetery.

W. Va., Huntington.—Cedar Grove Co., capital \$10,000, incptd. by B. W. Patridge, Jr., Frank Enslow, Jr., Geo. C. Garred and others.



W. Va., Mannington.—Mountain State Development Co., capital \$50,000, inctd. by A. W. Prichard, C. C. Bassett, R. E. Mockler and others.

### LUMBER MANUFACTURING

Ga., Macon.—Thos. N. Baker Lumber Co., capital stock \$10,000, inctd. by Thos. N. Baker, F. W. Armstrong and J. E. Beasley.

Ga., Savannah.—Georgia-Carolina Lumber Co. let contract to rebuild 5 burned drykilns to L. Moore Drykiln Co. of Jacksonville, Fla. (Lately noted.)

Ky., Ashland.—Standard Planing Mill Co., capital \$30,000, inctd. by Chas. Kitchen, J. B. Kitchen and J. H. Kitchen.

La., Mansfield.—Nabors Bros., capital \$15,000, inctd. by W. A. Nabors, Prest.; Fred Cowson, Secy.-Treas.

Miss., Tutwiler.—Tutwiler Lumber & Coal Co., capital \$10,000, inctd. by Mrs. B. L. Harrison, Dr. W. H. Harriss, Mrs. Mabel C. Reed and others.

S. C., Mullins.—Mullins Lumber Co. let contract Moore Drykiln Co. of Jacksonville, Fla., to rebuild drykilns lately noted burned at loss \$40,000.

Tenn., Columbia.—J. H. Thomas & Co. will erect building for planing mill; 80x125 ft.; 1 story; install new machines in addition to those now in use.

Va., McKenney.—Walter Williamson, Dinwiddie, Va., is installing sawmill, about 30 H. P., 5 mi. from McKenney.

Va., Waverly.—Gray Lumber Co. will rebuild mill lately noted burned; erect mill-construction building, cost about \$15,000; install pony band mill, cost about \$7500; machinery bids opened Apr. 20; daily capacity about 25,000 ft. short-leaf pine lumber. (See Machinery Wanted.)

W. Va., Grafton, Route 5, Box 92.—Dorsey L. Brown will replace portable sawmill lately noted burned; construction by owner; main building 20x40 ft.; boiler-house 15x30 ft.; install 30 H. P. sawmill; manufacture export lumber; 5000 to 8000 ft. daily capacity. (See Machinery Wanted.)

### METAL-WORKING PLANTS

La., New Orleans.—Sheet Metal.—Durand Bros. will build sheet-metal factory.

### MINING

Ala., Childersburg.—Onyx.—Alabama Decorative Stone Co., 420 Woodward Bldg., Birmingham, organized with C. G. Kershaw, Prest.; E. J. Goodwin, V.-P., and J. E. Mathis, Secy.-Treas.; reported to develop onyx mines 4 mi. from Childersburg.

Ark., Rush.—Zinc.—Yellow Rose Mining Co. is reported to build small concentrating mill.

Ark., Yellville.—Zinc.—W. A. Childs leased Beatty mines in Kingdon Springs Dist. and will develop; will build mill.

Ark., Yellville.—Zinc.—A. F. L. Cooper leased Winchester mine of Rock Creek and will develop.

Ark., Yellville.—Zinc.—Walter Sewall is reported to build small concentrating mill.

Ark., Yellville.—Zinc.—Fuller-Shepherd Mining Co. leased Coker Hollow zinc mine and will develop.

Ark., Yellville.—Zinc.—J. M. Hampton is reported to develop zinc mines.

Ga., Cartersville.—Barytes.—Krebs Pigment & Chemical Co., Newport, Del., now installing washing machinery at Oak Hill spar mine, so as to begin mining in June; installing high-tension motors operating with 2300 volts; will purchase electricity from Georgia Ry. & Power Co., Atlanta, Ga.; Morris W. Lee, Engr. for Krebs Company. (Lately noted.)

La., New Orleans.—Sulphur.—Louisiana Sulphur Drilling Co., H. N. Pharr, Olivier, La., Prest., and W. W. Hines, Secy.-Treas., purchased 10-acre tract (in section 30) from United Sulphur & Oil Co., 923 Maison Blanche, New Orleans; contemplates making final arrangements in June for drilling operations to be commenced early in July.

La., New Orleans.—Sulphur.—Investors' Sulphur & Oil Co. completed purchase of 10-acre tract (in section 31) from United Sulphur & Oil Co., and is now drilling. (Mentioned in January; also previously, under Gas and Oil Enterprises.)

La., New Orleans.—Sulphur.—United Drilling Co. purchased 10-acre tract (in section 30) from United Sulphur & Oil Co., 923 Maison Blanche, New Orleans; contemplates completing arrangements in June for operations to be commenced early in July; officers of United Drilling Co. include: Prest., Dr. B.

S. Hood, Bond, Miss.; Secy., W. W. Hines; Treas., W. A. Collins, Hattiesburg, Miss.

Mo., Joplin.—Zinc.—Joplin Ore & Spelter Co., capital \$100,000, inctd. by N. E. Walker, Geo. W. Means and R. O. Robinson.

Mo., Joplin.—Lead and Zinc.—O. W. Sparks is reported as planning erection of two 300-ton concentrating plants.

Okla., Tulsa.—Lead and Zinc.—Tulsa Lead & Zinc Co. (lately noted inctd.), capital stock \$50,000 organized; Dr. C. W. Day, Prest.; J. H. McBirney, V.-P.; D. H. Wilson, Secy.-Treas.; will develop 400 acres leases in Miami field, Ottawa county.

Tenn., Mascot.—Zinc.—American Zinc Co. of Tennessee will build addition to plant, increasing daily capacity from 1150 to 1800 tons ore; cost \$75,000; H. S. Kimball, Prest., Knoxville, Tenn.

Va., Big Stone Gap.—Iron.—Midway Mining Co., capital stock \$10,000, inctd. by J. E. Bunn, Prest.; C. E. Bunn, V.-P.; W. D. Bunn, Secy.-Treas.

Va., Crimora.—Manganese.—Crimora Manganese Corp., A. A. Hassan, Consult. Engr., Crimora, plans installation steam shovels, washing machinery, narrow-gauge locomotives, etc., in connection with development plans; has not bought equipment mentioned; lately noted as to increase 15-ton daily output to 50 tons and later to 200 tons; has New York office at 15 Broad St. (See Machinery Wanted.)

Va., Lynchburg.—Manganese.—Deerwood Manganese Mining Corporation, authorized capital \$600,000, inctd. by Orin Kellogg, Prest., Minneapolis, Minn.; Geo. Washburn, V.-P., Villard, Minn.; Wm. P. Smott, Treas., Danville, Ill.; R. O. Morden, Secy., Minneapolis.

Va., Marion.—Manganese.—Manganese Products Co. (lately noted inctd.), capital stock \$1,000,000, Enon M. Harris, Prest., Darby, Pa., formed to take over holdings of E. M. Harris & Co., operators of manganese property near Sugar Grove, Smyth county; bought and will soon install washing and separating machinery.

Va., Woodstock.—Manganese.—H. P. Binswanger, 30 E. 42d St., New York, will develop Powell's Fort manganese mines, 11 mi. from Woodstock; mining in charge of J. Carson Adkerson, Engr., Lynchburg, Va.

### MISCELLANEOUS CONSTRUCTION

Ala., Anniston.—Dam.—Knox Hughes will construct dam across Coldwater Creek.

Ala., Tuscaloosa.—Wharf.—Tuscaloosa Street Ry. Co. is reported to construct wharf and warehouse equipped with electric crane, etc., on Warrior River.

Fla., Jacksonville.—Terminal Facilities.—Commodore Point Terminal Co., A. G. Cummer, Prest., will develop 1 mi. deep-water front on St. Johns River, with 100 acres back of bulkhead line; plans contemplate bulkheading and filling in land, constructing suitable docks, building warehouses, etc., to accommodate any industries requiring deep water and rail facilities; expects to furnish facilities within 9 months. (Lately noted inctd., capital stock \$900,000.)

Fla., West Palm Beach.—Seawall.—City, A. M. Lopez, Clerk, opens bids May 7 to construct lately-noted seawall, streets and sewers; \$100,000 bonds; seawall quantities include 1350 cu. yds. reinforced concrete, 73.44 tons steel reinforcement, 11,460 lbs. anchor rods, bolts, nuts and washers; 5720 lin. ft. 10-in. round pipe, 99,423 cu. yds. fill, 2415 sq. yds. sidewalk; J. B. McCrary Co., Engr., 1408 Third National Bank Bldg., Atlanta, Ga. (See Machinery Wanted.)

Ky., Louisville.—Underpass.—Park Commissioners, Harry S. Smith, Secy., 602 Columbia Bldg., invite bids until Apr. 22 to construct approaches to underpass on Eastern Parkway between Floyd and Brook Sts.; specifications obtainable from Stone-street & Ford, Engrs., Louisville Trust Bldg. (Lately noted inviting bids for underpass to cost \$22,000.)

La., New Orleans.—Dock Landing.—Dock Board let contract Doullut & Co. of New Orleans at \$194,600 to construct Valence St. landing.

La., New Orleans.—Government let contract Gibson, Hamilton & Co., New Orleans, at \$36,129 to construct Hard Times Levee, Dists. Nos. 1 and 2, Lower Tensas Levee Dist., and to Dameron-White Co., Hibernia Bank Bldg., New Orleans, at \$12,008 to build Lecour Levee, Lot No. 2; W. G. Caples, Maj., Engrs., Queen and Crescent Bldg. (Lately noted inviting bids for 200,000 cu. yds. earthwork in Lower Tensas and Atchafalaya Levee Dists.)

Md., Baltimore.—Swimming Pool.—City let contract Harry N. Brannan, 4007 Bell Ave., to construct concrete swimming pool in Clifton Park; 315x570 ft., 6.6 acres; about 2500 cu. yds. concrete; electric lighting; W. S. Manning, Gen. Supt. Park Comms., Madison Ave. entrance to Druid Hill Park. (Lately noted.)

Md., Cumberland.—Subway.—Baltimore & Ohio R. R., F. L. Stuart, Ch. Engr., Baltimore, approved plans by Jas. P. Gaffney, City Engr., for subway under Greene-St. crossing; width 48 ft.; sidewalks on each side; clearance of 12 ft.; estimated cost \$37,000, of which railroad appropriated \$12,000. (Noted in December.)

Miss., Greenville.—Levee.—Mississippi Levee Comms. let contract R. W. Clark & Co. to construct 265,000 cu. yds. levee work in Issaquena County Dist.; issued \$100,000 in certificates of indebtedness; W. L. Thompson, Ch. Engr. (Call for bids lately noted.)

S. C., Columbia.—Heating Plant.—University of South Carolina will soon receive bids on lately-noted extension of central heating plant to Le Conte College; plans, by Wilson & Sompayrac, Columbia, to be completed Apr. 26. (See Machinery Wanted.)

Tenn., Memphis.—Canal.—Mississippi River Com., Col. McD. Townsend, Chmn., is reported to expend \$100,000 to construct canal to change course of Wolf River and eliminate sandbar; E. M. Markham, Maj., Engrs., is authorized to proceed with work.

Tex., Waxahachie.—Levee.—T. H. Harbin invites bids until May 10 to construct levee on Chambers Creek; 175,000 cu. yds.; Engr., J. W. Martin. (See Machinery Wanted.)

Va., Hampton.—Pier.—Newport News & Hampton Ry., Gas & Electric Co., B. J. Megginson, Supt., is reported to rebuild pier over East Hampton Creek.

Va., Richmond.—Spillway.—Administrative Board will let contract Javi-Perkins Construction Co., Inc., at \$321,711 to construct concrete spillway at Shield's Lake, William Byrd Park.

### MISCELLANEOUS ENTERPRISES

Ark., Jonesboro.—Greenhouses.—R. L. Graves of Paducah, Ky., is reported to build system of greenhouses; estimated to require 10,000 sq. ft. glass.

Md., Elkton.—Engineering, etc.—Gas Engineering & Construction Co., capital \$25,000, inctd. by Clement M. Egnor and others.

Mo., Kansas City.—Construction.—Wells Bros. Construction Co., capital \$3000, incorporated by Harry W., Ralph W. and Rolla R. Wells.

Mo., Kansas City.—Publishing.—El Cosmopolitan Publishing Co., capital \$2000, inctd. by E. P. Bennett, Ralph Vanneman and Harry L. Jacobs.

Mo., Kansas City.—Livestock.—Bright Bros. Livestock Commission Co., capital \$10,000, inctd. by M. A. and B. M. Bright and Lewis M. Hyre.

Mo., Kansas City.—Grain Elevator.—Alton Grain Elevator Co., capital \$105,500, inctd. by E. D. Fisher, E. F. Swinney and W. M. Corbett.

Mo., St. Louis.—Heating Plants.—Continental Furnace Efficiency Co., capital stock \$5000, inctd. by Wm. C. Hay, Jas. W. Hay, Chas. J. Free and others.

Okla., El Reno.—Hardware.—Owen Hardware Co. inctd.; capital stock \$5000; W. W. Storm, Prest.; J. M. Owen, V.-P.; Lon Owen, Secy.-Treas.

Okla., Muskogee.—Transfer and Storage.—City Transfer & Storage Co., capital stock \$2500, inctd. by J. F. Johnston and W. H. Bailey of Muskogee and L. W. Childress, St. Louis, Mo.

Tenn., Chattanooga.—Printing.—Dearing Printing Co., capital \$5000, inctd. by Fred M. Dearing, Paul J. Mullery, Kelley O'Rear and others.

Tenn., Knoxville.—Construction.—Gibson Construction Co., capital stock \$5000, inctd. by H. C. McCreary, J. R. Gibson, D. T. Blakey and others.

Tenn., Nashville.—Construction.—Hunt Bros. Construction Co., capital stock \$5000, inctd. by F. E. Hunt, Geo. R. Hunt, F. W. Hunt and others.

Tex., Chillicothe.—Grain Elevator.—Orient Milling Co. (lately noted as to build elevator) purchased Rutherford mill and elevator.

Tex., Cuero.—Cotton Pickery.—Cuero Compress & Warehouse Co. contemplates building cotton pickery; has not purchased equipment. (See Machinery Wanted.)

Tex., Hillsboro.—Crematory.—City voted \$5000 bonds to build crematory; M. W. Lovell, Mayor. (Lately noted.)

Tex., San Antonio.—Engineering.—Anderson Engineering Co., capital stock \$5000, incorporated by E. G. Millikan, T. Anderson and C. S. Green.

Tex., Winnie.—Dairy and Creamery.—Mrs. Evans of Minneapolis, Minn., is reported to have secured entire interest of M. E. Wilson & Co. at Winnie, including portion of Winnie townsite and several thousand acres land, mainly uncultivated; plans to establish dairy farm and creamery; build barns and silos.

Va., Alexandria.—Steamboat Line.—People's Line, capital stock \$4000, inctd.; Stephen Davis, Prest.-Treas.; Wm. L. Davis, V.-P., both of Alexandria; A. W. Kelley, Secy., Washington, D. C.

Va., Glade Spring.—Hardware and Supplies.—Glade Spring Hardware & Supply Co., capital \$20,000, inctd.; E. M. Atkins, Prest.; P. G. Pendleton, Secy.-Treas.

Va., Roanoke.—Bathing Resort.—Jon. Hanna plans to organize company with \$12,000 to \$15,000 capital stock to develop pleasure resort on Roanoke River; improvements to include swimming pool, bathhouse and dancing pavilion.

Va., Sweet Hall.—Ferry.—Pamunkey Ferry Co., capital stock \$5000, inctd.; W. C. Stone, Prest.; H. F. Galpin, V.-P. N. R. Palmer, Secy.; C. M. Brown, Treas.

W. Va., Huntington.—Incinerator.—City Comms. received proposition from Macon (Ga.) incinerator manufacturing company to install incinerator.

W. Va., Mable.—Hog-raising.—West Virginia Hog Co., capital stock \$5000, inctd.; leased 3000 acres in Roaring Creek Dist., Randolph county; Jasper S. Kyle, Prest.; J. J. Keim, Secy., Treas. and Gen. Mgr.

W. Va., Morgantown.—Limestone Crushing, etc.—Greer Limestone Co. begun erection of buildings for plant; ordinary construction; install air compressors, pulverizers, rock drills, screens, gyrators, etc., costing \$30,000; produce crushed limestone and pulverized lime; Monongahela Valley Engineering Co., Archt. and Constr. Engr., Morgantown. (Lately noted to build plant.)

### MISCELLANEOUS FACTORIES

Fla., Miami.—Ice Cream.—Christiansen Bros., 925 Ave. D, will erect building; first floor for ice-cream factory and stores; concrete structure; 90x50 ft.; cost \$3000; building proposals opened Apr. 22; plans by Nolan & Sculthorpe; O. Christiansen, Prest.; J. T. Christiansen, V.-P.; E. B. Christiansen, Secy., Treas. and Mgr. (See Machinery Wanted.)

Fla., Tampa.—Bakery.—Reynolds & Butloff are having plans prepared by Archt. Grimmer for 2-story brick bakery at Scott and Lozano Sts.; contain storeroom and offices; bids opened Apr. 15.

Ga., Gainesville.—Bottling.—Gainesville Chero-Cola Bottling Co., capital stock \$5000, inctd. by W. F. Seay and Mrs. A. F. Strozler.

Ga., Rome.—Chemicals.—Imperial Chemical Co., capital stock \$10,000, inctd. by P. C. Jack and H. C. Landsell.

La., Alexandria.—Ice Cream, etc.—Southern Dairy Co., capital stock \$5000, inctd. by Frank W. Jansen, Richard W. Rowlands, Richard C. McElmurry and others.

La., New Orleans.—Coffee.—O. P. Mohr, 210 Machena Bldg., is reported to have plans for factory and warehouse; cost \$50,000.

Md., Baltimore.—Ships.—Skinner Shipbuilding & Drydock Co. completed arrangements for reorganization in accordance with plan heretofore noted; plant purchased by representative of bondholders, who have accepted reorganization plan; contemplates having additional capital for improvements, details to be determined later; Holden A. Evans, V.-P. and Gen. Mgr.

Md., Baltimore.—Typewriters.—Victor Typewriter Co., 812 Greenwich St., New York, plans increase of capital and establishment of works at Baltimore or some other city offering manufacturing advantages for its purpose; architects now preparing plans for buildings.

Mo., Crocker.—Bottling.—Crystal Ice & Bottling Co. inctd. by E. F. Carver and others. (See Ice and Cold-Storage Plants.)

Mo., Kansas City.—Silos.—Twinal Silo Co., capital \$2000, inctd. by J. J. Holmes, Louis Hector and S. A. H. Handy.

Mo., St. Louis.—Silos.—International Silo Co., capital stock \$10,000, inctd. by Wm. F. Mounts, Wm. H. Buchanan, Henry H. Fisher and others.

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Mo., St. Louis—Clothing.—Newburger Garment Co., capital stock \$9000, inapt. by Marshall Newburger, Alfred and Eugene S. Tubolske.

Mo., St. Louis—Distillery.—Nelson Importing & Distilling Co., capital stock \$30,000, inapt. by Gerd C. Heye, Edward M. Mason and John Kottwinkel.

N. C., Charlotte—Medicine.—Dixie Medicine Co., capital \$25,000, inapt. by G. A. Smith, C. R. Mayer and F. A. Ernst.

N. C., Charlotte—Fuel-saving Device.—Palmer Forced Draft Burner Co., capital \$15,000, inapt. by W. C. Alexander, H. V. Rice and H. O. Dorsey.

N. C., Greenville—Bottling.—Greenville Chero-Cola Co., capital \$10,000, inapt. by W. J. Hardee, C. M. Warren and R. T. Cox.

N. C., Newbern—Ice Cream.—Carolina Ice Cream Co., secured building and will establish plant to manufacture 50 to 150 gals. ice cream daily; J. W. Hunter, Wilmington, N. C., Prest.; Frank D. Perry, Secy.-Treas.; Hugh D. Wood, Mgr.

Okl., Ardmore—Molasses.—Morris Sass will build molasses factory; plant 35 acres in cane; also plans to use waste in manufacture of stock feed.

Okl., Okmulgee—Harrows.—Luster Mfg. Co., lately noted inapt., capital stock \$12,000, will produce patented harrows. (See Foundry and Machine Plants.)

Okl., Oklahoma City—Silo.—Scientific Silo & Mfg. Co., capital stock \$10,000, inapt. by W. C. Terry, T. M. Latham, Philo S. Harris and R. S. Thompson of Texhoma, Okla.

Okl., Oklahoma City—Safety Appliances.—Carr Safety Appliance Co. (lately noted incorporated, capital stock \$50,000) organized; S. C. Carr, Prest.; C. F. Dyer, V.-P.; B. E. Chapin, Secy.-Treas.; will manufacture following patented articles: Automatic safety gas cut-off; safety stop for steam engines; automatic control knob lock, and hermetic non-vacuum jar closure.

Okl., Stillwater—Bakery.—Margaret Tinker will erect lately noted building; 2 stories; 25x44 ft.; tin roof; electric lighting; sidewalk to cost \$1000; construction by Andy Tinker.

Tenn., Cleveland—Bottling.—Tennessee Cola Nip Bottling Co. capital stock \$40,000, organized with Jacob Smith, Prest.-Treas.; J. R. Blackburn, Secy.; offices in Fillham Bldg.

Tenn., Jackson—Bottling.—Cheri-Cola Co. (E. O. Richardson of Jasper, Ala., and others) leased Felsenthal Bldg., at Chester and Liberty Sts., and will install bottling plant.

Tenn., Memphis—Saddlery.—Hart Saddlery Co. will erect 2-story brick building at 287 Gayoso Ave.; cost \$20,000; Contr., A. Whiffen.

Tenn., Nashville—Automobile Wheels.—Federal Mfg. Co. increased capital stock from \$100,000 to \$200,000.

Tenn., Nashville—Paint.—Zazoin Mfg. Co., capital stock \$50,000, inapt. by A. P. Freeman, Dr. J. W. Brown, A. P. Foster and others.

Tex., Beeville—Ice Cream and Cheese.—M. E. Van Every, Berclair, Tex., contemplates establishing cheese factory and ice-cream plant in near future, but has no definite plans at present. (Lately noted.)

Tex., El Paso—Hills, Sutton & White Mfg. Co., capital stock \$15,000, inapt. by E. G. Hills, F. W. Sutton, W. E. White and R. B. Sutton.

Tex., Haskell—Bottling.—Haskell Ice & Light Co. (W. G. Swenson of Abilene, Tex., and others) acquired bottling plant and will remodel. (See Ice and Cold-storage Plants.)

Tex., Houston—Silo.—Southern Farmers' Silo Co., capital stock \$20,000, inapt. by Dave A. Weis, Joy Mickleson and J. C. Meininger.

Tex., Winnie—Creamery.—Mrs. Evans of Minneapolis, Minn., is reported to establish creamery and dairy. (See Miscellaneous Enterprises.)

Va., Portsmouth—Skirts and Middy Suits.—Textile Products Co. inapt., capital stock \$15,000, to establish lately noted plant to manufacture skirts and middy suits; John B. Royer, Prest.; F. D. Perry, V.-P.; Paul Bargamin, Secy.-Treas.; F. W. Zimmerman, Mgr.

Va., Richmond—Shrapnel, etc.—American Locomotive Co., 30 Church St., New York, has contract for 2,500,000 shrapnel and cartridge casings; manufacture half at Richmond and half at Dunkirk, N. Y.; ordered several hundred machines (especially turret lathes) for this contract. (Lately noted.)

## MOTORS AND GARAGES

Ark., Little Rock—Garage.—Morrison M. Cohn is reported to build garage.

D. C., Washington—Automobile Line.—Jitney Bus Co., capital \$50,000, inapt. by B. Bulkey (308-309 Woodward Bldg.), M. S. Carlin, R. W. Bulkey and others.

D. C., Washington—Garage.—E. M. Dullin, 1207 New Hampshire Ave., will erect public garage at 1131-41 21st St. N. W.; brick and steel; steam heat; electric light; cost \$21,000; A. E. Landvoigt, Archt., 713 14th St. N. W., Washington. (Noted in Mar. to take bids.)

D. C., Washington—Garage, etc.—Jas. H. Brady has plans by Waddy B. Wood, 816 Connecticut Ave., Washington, for garage and stable at Woodlawn Rd. and 35th St.; 48x66 ft.; brick; tile roof; steam heat; electric light; cost about \$20,000; bids opened Apr. 22.

Fla., Clearwater—Garage.—Ziegler & Ziegler will build garage at 901 N. Broadway; brick; cost \$6000; Contr., J. W. Van Meter.

Ga., Atlanta—Automobiles.—W. A. Williams, Lima, O., is reported to build automobile factory.

Mo., St. Louis—Automobiles.—Bayliss Motors Co., capital \$5000, inapt. by H. G. Ferguson, Frank J. Gladney and Benson Bayliss.

Mo., St. Louis—Automobiles.—Bleek Automobile Co., capital stock \$10,000, inapt. by John N. Bleek, August M. Bleek and Eugene Herr.

Okl., Sapulpa—Automobiles.—Sapulpa Auto Co., capital stock \$3000, inapt. by Chas. W. Bliss, Bliss Bldg., Tulsa, and others.

Okl., Sapulpa—Garage.—Producers' Garage inapt. by W. P. Root, L. V. Hopkins and Phebe M. Perkins.

S. C., Charleston—Automobile Supplies.—Charleston Auto Supply Co., capital stock \$2000, inapt. by M. G. Giles and J. P. Sanders.

Tenn., Tracy City—Automobiles.—Tracy City Auto Co., capital \$5000, inapt. by G. M. Thorogood, R. B. Roberts, W. J. Williams and others.

Tenn., Nashville—Automobile Line.—Cumberland Jitney Co., capital stock \$2000, inapt. by H. L. Rich, W. M. Kile, H. C. Kline and others.

Tenn., Nashville—Automobile Line.—Dixie Jitney Co., capital stock \$2000, inapt. by F. M. Carter, S. M. Allen, Jr., J. W. Kerr and others.

Tex., Dallas—Automobiles.—Lake Wood Motor Co., capital stock \$1500, inapt. by H. A. McDougle, W. O. Furgason and Sam Raltman.

Tex., Dallas—Garage.—Mitchell Electric Garage & Storage Battery Co., capital stock \$5000, inapt. by C. Mitchell, Max Rothman and A. Kramer.

Tex., Hondo—Garage.—Weynand Bros. will build garage.

Va., Richmond—Automobiles.—E. D. Stone Motor Co., capital stock \$10,000, inapt.; M. P. Stone, Prest.; F. H. Dula, Secy.-Treas.

Va., Richmond—Automobile Line.—General Motor Corp., capital \$100,000, inapt.; Fred Sitterding, Jr., Prest.; Andrew D. Christian, V.-P.; T. J. Hundley, Secy.-Treas.

Va., Rosslyn—Automobiles.—Arlington-Barcroft Auto Co., capital \$10,000, inapt.; C. R. Frichard, Prest.; Robt. E. Bender, V.-P., both of Rosslyn; Albert Ashton, Secy.-Treas., Ballston, Va.

## RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ark., Biddle (not a postoffice).—Chicago, Rock Island & Pacific Ry., C. A. Morse, Ch. Engr., Chicago, Ill., is reported to build car-repair shed, covering 5 tracks and accommodating 150 cars; estimated cost \$60,000.

Ky., Lexington.—Chesapeake & Ohio Ry., F. I. Cabell, Chief Engr., Richmond, Va., let contract Combs Lumber Co. of Lexington for buildings in Netherlands yards; to include 7-stall roundhouse, machine and repair shops, master mechanic's office, engineers' locker, storage rooms, etc.; main building to be semi-circular, of brick, concrete and structural steel; estimated cost \$100,000. (Lately noted.)

N. C., Raleigh.—Norfolk Southern R. R., F. L. Nicholson, Ch. Engr., Norfolk, Va., is reported to build steel-working plant to manufacture steel frames for reinforcement of underwork of freight equipment; also reported to build main repair shops in Raleigh; stated will have capacity to handle 125 cars in repair yard at one time.

Tex., Palestine.—Texas State R. R., Chas. Hurdleston, Mgr., Rusk, is reported to build roundhouse, car shed and coal chute.

Va., Portsmouth.—Seaboard Air Line Ry., W. D. Faucette, Ch. Engr., Norfolk, let contract Richardson Construction Co., Norfolk, to erect temporary building for machine shops; lately noted burned at loss of \$300,000 and to be rebuilt; will arrange for permanent rebuilding.

## ROAD AND STREET WORK

Ala., Tuskegee.—City let contract Thorpe Construction Co., Montgomery, to gravel 2 mi. Main St.; Engr., F. W. Thirkield; Ernest W. Thompson, Mayor. (Call for bids lately noted.)

Ark., Ashdown.—Little River county is reported to have organized 2 road districts extending 10 mi. north and south, respectively, of Ashdown. Address County Commissioners.

Ala., Linden.—Marengo county will grade, drain and surface with gravel section of road to cost about \$4600; County Comms. receive bids until May 11; W. S. Keller, State Highway Engr., Montgomery. (See Machinery Wanted.)

Fla., Brooksville.—Hernando county, M. H. Snow, Clerk, will expend \$250,000 on rock roads to be constructed by county force; no contracts; Jaudon Engineering Co., Engr., Savannah, Ga.

Fla., Jacksonville.—Duval County Comms., E. A. Ricker, Chrmn., has indefinitely postponed lately described improvements on about 37 mi. John Anderson Highway, National Highway, Kings Rd., etc., and building of bridges. (Bids previously noted for April 8.)

Fla., Miami.—Dade county, southern section, voted \$100,000 bonds to construct Ingraham highway from Homestead south to Monroe county line. Address County Commissioners. (Noted in March.)

Fla., Pensacola.—Bureau of Yards and Docks, Navy Dept., Washington, D. C., asks bids until May 1 to construct macadam road at navy-yard, Pensacola. (See Machinery Wanted.)

Fla., West Palm Beach.—City, A. M. Lopez, Clerk, will open bids May 7 to construct lately noted streets; about 40,000 sq. yds. macadam pavement; 29,900 sq. yds. rock surfacing; 5544 cu. yds. grading; J. B. McCrary Co., Engr., 1408 Third National Bank Bldg., Atlanta, Ga. (See Miscellaneous Construction and Machinery Wanted.)

Ga., Calhoun.—Gordon County Comms. have about \$10,000 available for road construction.

Ky., Lexington.—Lexington Hydraulic & Mfg. Co. and Dr. Geo. O. Graves are reported to have let contract Wm. Lutes & Co. to build road from Richmond pike to dam at new reservoir; macadam; 1½ mi.

Ky., London.—Laurel county voted \$100,000 road bonds. Address County Comms.

Ky., London.—Laurel county voted Apr. 13 on \$100,000 road bonds. Address County Commissioners.

Ky., Owensboro.—Davless county votes June 22 on \$600,000 bonds to construct roads. Address County Comms.

Ky., Versailles.—Woodford County Fiscal Court will construct State-aid road; State appropriated \$11,966 and county will appropriate like amount to rebuild Frankfort, Midway, Clifton and McCowan's Ferry turnpikes; W. H. Edwards, Jr., County Road Engr.

Ky., Whitesburg.—Letcher county is reported to vote in Nov. on road construction bonds. Address County Comms., Henry T. Day, County Judge. (County lately noted to expend \$25,000 on road and bridge construction between Whitesburg and Fleming.)

La., Baton Rouge.—City will construct about 170,000 sq. yds. bituminous gravel pavement with concrete curb and gutter, subsurface drainage, etc.; also about 22,000 sq. yds. hard-surface pavement on concrete base; bids by Commission Council until May 15; John J. Mundinger, City Engr. (See Machinery Wanted.)

La., Franklin.—St. Mary parish will construct about 50 mi. gravel or shell and gravel surface highway; about \$340,000 available; open bids May 17; bonds lately noted; Chas. N. Frost, Chrmn. Police Jury and Road Commission; Walter Y. Kemper, Franklin, and Warren B. Reed, Morgan City, La., Consult. Engrs. (See Machinery Wanted.)

La., Jena.—Highway Dept., Board of State Engrs., W. E. Atkinson, State Highway Engr., Room 104 New Orleans Court

Bldg., let contract J. N. George & Son, Shreveport, at \$9655 to construct 5 mi. earth road on Jena-Colfax Highway, Ward 3, La Salle parish. (Call for bids lately noted.)

La., Lake Charles.—Calcasieu parish will construct highways 6, 8, 10, 11 and 16; about 43 mi. grading; bids until May 4; Fred. Shuttis, Parish Engr.; E. C. House, Clerk Police Jury; this work previously mainly noted. (See Machinery Wanted.)

Md., Baltimore.—City let contract No. 138 to P. Flanagan & Sons, 120 E. Lexington St., at \$5391.75 to pave with sheet asphalt Winchester St. from Poplar Grove to Longwood St. and Oakhurst Pl. from Winchester St. to Patterson Ave.; about 2600 sq. yds. (Call for bids lately noted.)

Md., Baltimore.—Maryland State Roads Com., O. E. Weiler, Chrmn., 601 Garrett Bldg., will let contract Apr. 27 to build 1 section, about 1.91 mi. gravel road, Charles county; contract No. Ch-6. (See Machinery Wanted.)

Md., Cambridge.—Dorchester county will construct section State-aid highway upon or along Nanticoke River Rd. between Vienna and Hollands Cross-Roads; length, 2 mi.; width, 9 ft.; shell macadam; County Comms. receive bids until May 11; R. H. Dixon, Jr., Roads Engr. (See Machinery Wanted.)

Md., Frederick.—Frederick County Commissioners, John W. Holton, Prest., will build 1½ mi. State-aid highway on road from State road at Finger-board to Hyattstown; bids until May 11. (See Machinery Wanted.)

Md., Towson.—Baltimore County Comms. let contract P. Flanagan & Sons, 120 E. Lexington St., Baltimore, at \$7110 to improve Belvedere Ave., Park Heights to Reisterstown Rd., and Thos. B. Gatch & Son, Belair Rd., Rapsburg, Md., at \$6128 to improve Old Court Rd., 1 mi., macadam; Chas. J. Fox, Ch. Clerk. (Call for bids lately noted.)

Miss., Hazlehurst.—Copiah County Dist. No. 5 will open bids June 7 to construct previously-noted gravel roads; \$150,000 available; J. M. Danpeper, Prest. Road Comms., Crystal Springs, Miss.; Xavier A. Kramer, Engr., Magnolia, Miss. (See Machinery Wanted.)

Mo., Fayette.—City will pave Church St.; C. J. Rains, City Engr., will prepare specifications and estimate cost.

Mo., St. Louis.—City let contract Webb-Kunze Construction Co. of St. Louis at \$57,000 to pave streets; will include 17,000 cu. yds. grading, 14,000 ft. granite curb and 25,000 sq. yds. brick pavement.

N. C., Bakersville.—Mitchell county will issue \$30,000 bonds to construct roads in Grassy Creek Township; D. W. Tipton, Chrmn. County Comms.

N. C., Belmont.—City will lay 1 mi. cement sidewalk. Address The Mayor.

N. C., Franklin.—Highway Com. let contract J. R. Gilson, Knoxville, Tenn., to construct 2½ mi. macadam pavement.

N. C., Goldsboro.—Mount Olive Road Dist., J. A. Westbrook, Chrmn., let contract to C. D. Rigsbee to construct sand-clay roads lately noted; bond issue \$30,000.

N. C., Greensboro.—Irving Park Co. let contract to R. M. Hudson Construction Co., Atlanta, Ga., for 8000 yds. street paving with concrete base and asphalt surface. (Lately noted.)

N. C., Greensboro.—City Comms. let contract R. G. Lassiter of Oxford, N. C., at \$87,350 to pave about 75,000 sq. yds. of streets with Mexican oil asphalt; 65,000 sq. yds. to be city paving costing \$75,000 and 9500 sq. yds. street railway paving costing \$12,350; Edward W. Myers, Engr.; T. J. Murphy, Mayor. (Call for bids lately noted.)

N. C., Lexington.—Davidson county (previously noted to issue \$300,000 for road construction) will equip 2 or 3 road-construction outfits to be owned by county; may contract some work later; will construct most of bridge work by county force, buying steel direct and fabricating I-beam spans; R. T. Brown, Engr., Lexington. (See Bridges, Culverts, Viaducts.)

N. C., Marshall.—Madison County Highway Com. let contract Berry Fortune Construction Co., Augusta, Ga., to grade 6.9 mi. road; 73,550 cu. yds. excavation, 350 cu. yds. concrete for small culverts, etc.; J. B. Clingham, County Road Engr. (Call for bids lately noted.)

N. C., Nashville.—Nash county, North Whitakers Township Road Dist., votes May 15 on \$15,000 bonds to construct roads; J. B. Biddle, Clerk County Comms.

N. C., Roxboro.—Person county, Roxboro township, votes May 11 on \$75,000 bonds to construct roads. W. E. Webb, Clerk.



N. C., Plymouth.—Washington county will rebuild 3 mi. road; open bids May 3; \$10,000 available; W. S. Davenport, Engr., Mackeys, N. C. (See Machinery Wanted.)

N. C., Yadkinville.—Yadkin County Commissioners will issue \$60,000 bonds ordered by Legislature to construct road from new bridge between Yadkin and Forsyth counties across county to Jonesville or some other point on Wilkes county line. (County lately noted to have defeated \$200,000 bonds.)

S. C., Columbia.—Richland County Commissioners have legislative authority to issue \$1,250,000 bonds to improve roads. (Noted in February.)

Tenn., Chattanooga.—Hamilton county, Will Cummings, Judge, will issue \$25,000 road bonds.

Tenn., Madisonville.—Monroe county votes July 15 on \$300,000 bonds to construct roads. Address County Commrs.

Tenn., Nashville.—Board of Commrs., J. W. Dashiell, Secy., invites bids until Apr. 29 to pave various streets with wood block, bitulithic, granite block, concrete, bituminous macadam and bitustone; sold \$430,000 bond issue; H. E. Howse, Mayor. W. W. Southgate, City Engr. (See Machinery Wanted.)

Tenn., Newport.—Cooke county votes May 15 on \$300,000 bonds to construct roads. Address County Commrs.

Tenn., Selmer.—City let contract D. T. Smith of Selmer to construct concrete sidewalks on south side Cypress Ave. from Mobile & Ohio R. R. to 7th St.; estimated to comprise 7500 sq. ft.; authorized construction of concrete sidewalks on north side Court Ave. from 4th to 9th St.; estimated to comprise 5100 sq. ft., and will let contract within 30 days.

Tenn., Tazewell.—Claborn county is reported to have voted \$380,000 bonds to construct roads. Address County Commrs.

Tex., Angleton.—Brazoria county road work, under construction and contemplated, includes following: Road Dist. No. 6, bond issue \$150,000; Dist. No. 8, bonds \$72,000; No. 9, bonds \$38,000; No. 11, bonds \$20,000; hard-surfaced roads (clay-gravel or shell); contracts let in Dist. 8 and 9 to D. T. Austin, Velasco, Tex.; J. C. Tolman Engineering Co., Engr., Houston.

Tex., Ballinger.—Runnels county defeated \$120,000 bonds to construct roads; plans to hold another election. Address County Commrs. (Noted in February.)

Tex., Cuero.—De Witt county (Road Dist. No. 2) voted \$50,000 bonds to construct roads. Address County Commrs.

Tex., Cuero.—De Witt county (Cuero, Edgar and Concrete Dist.) will vote Apr. 22 on \$35,000 road-improvement bonds. Address County Commrs.

Tex., Hallettsville.—Lavaca County Road Dist. No. 1 (including Yoakum) votes May 5 on \$50,000 bonds to construct roads. Address County Commrs.

Tex., Houston.—Harris county let contract to Chas. Kilgore to construct Cedar Bayou and Evergreen Rd.; 5000 cu. yds. grading, furnishing and installing culverts, and clearing and grubbing 3 acres; H. L. Washburn, County Auditor. (Bids lately noted.)

Tex., Houston.—Harris County Commrs. let contract Eureka Paving Co., Carter Bldg., Houston, to pave Main St. Blvd., with asphaltic concrete; width 100 ft.; contract price \$142,228 to \$150,915, according to grade of asphalt used, which will be agreed upon between City Council and County Commrs.; county appropriated \$100,000; city to pay balance; Ben Campbell, Mayor. (Call for bids lately noted.)

Tex., Kaufman.—Kaufman county, Justice Precinct No. 2 (Forney), will construct system of permanent roads and bridges; \$200,000 available; Road Commrs. receive bids until May 11; Jas. C. Cooley, County Judge. (See Machinery Wanted.)

Tex., McKinney.—Collin county will construct about 125 mi. public highway; about 70 mi. in Road Dist. No. 4, 40 mi. Dist. No. 8, and 30 mi. Dist. No. 9; bids by Commrs. Court until June 7; macadam, gravel and concrete roads; plans and specifications with John Mead, County Engr., McKinney; bonds \$665,000. (See Machinery Wanted.)

Tex., Port Lavaca.—Calhoun County Road Dist. No. 2 defeated \$35,000 road bonds. (Lately noted.)

Tex., Port Lavaca.—City votes May 18 on \$17,000 bonds to macadamize, gravel or shell streets; H. C. Innis, Mayor. (Lately noted.)

Tex., Victoria.—City, C. Wertheimer, Secy., voted previously-noted \$30,000 bonds for street and bridge construction.

Va., Gate City.—Scott County Commrs. let contract Oliver & Hill of Maryville, Tenn., to construct roads; issued \$300,000 bonds.

Va., Lawrenceville.—Brunswick county will construct 50.57 mi. soil road in Sturgeon Dist.; bids received at Clerk's office until Apr. 26; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted.)

Va., Lawrenceville.—Brunswick County Supvrs. let contract Battershill & Gregory of Virginia, Va., to construct 17.38 mi. road in Meherrin Dist., on road from Brodnax to Joyceville, and on Brodnax-Ebony Rd. to Mecklenburg county line.

Va., Lebanon.—Russell county will construct 1½ mi. Castle Run Rd.; macadam; bids received at Clerk's office until Apr. 23; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted.)

Va., Lexington.—Rockbridge county let contract S. B. Mosby, Bedford, Va., to construct 2½ mi. macadam roads; A. Shields, County Clerk.

Va., Norfolk.—City let contract Louis Lawson of Norfolk to pave intersections of streets and street railway crossings in Lamberts Point.

W. Va., Charleston.—Kanawha County Commrs. let contract Glover & Kimberling Co. to pave Charleston and Point Pleasant Rd., 16 ft. wide, and Charleston-St. Albans Rd., both with brick; Central Engineering Co., road from Charleston to Malden, 16 ft. wide, and parts of Charleston-St. Albans Rd. within Union Dist., 9 ft. wide, both with asphalt-concrete; Atlantic Bitulithic Co., Richmond, Va., extension of Sissonville pike, 14 ft. wide, to district line, with Warrenite paving; contracts subject to election; A. E. Humphries and others, Good Roads Committee. (Lately noted to vote Apr. 24 on \$315,000 bonds to build about 15 mi. road.)

W. Va., Huntington.—Cabell county votes May 22 on \$600,000 bonds to construct roads. Address County Commrs. (Lately noted.)

W. Va., Wayne.—Wayne county, Ceredo Dist., will construct 3 mi. of hard road between Four Pole and Twelve Pole; Sam J. Crum, Clerk, receives bids until May 1; bids received on brick, concrete and asphalt. (See Machinery Wanted.)

W. Va., Parkersburg.—City will expend \$57,481.60 to pave 10 streets, including paving of Ann St. and Murdoch Ave., with brick. Address The Mayor.

W. Va., Parkersburg.—Woods County Commissioners are reported to expend \$40,000 to construct concrete roads on Staunton and Northwestern pikes.

W. Va., Stealey Heights, P. O. at Clarksburg.—City voted Apr. 21 on \$30,000 bonds to improve streets. Address The Mayor.

### SEWER CONSTRUCTION

Ala., Elba.—City, W. M. Tucker, Mayor, let contract to Sullivan, Long & Haggerty, Bessemer, Ala., at \$708.64 for lately-noted sewer construction.

Ala., Northport.—City votes May 17 on \$16,000 bonds to construct sewer system and water-works. C. P. Bell, Mayor.

Ark., Siloam Springs.—City will construct lately-noted sanitary sewer system; bids by Board of Improvement, Sewer Dist. No. 1, R. J. Alfrey, Secy., until May 12; includes sewer pipe, cast-iron pipe, 136 manholes, flush tanks, lampholes, etc., and disposal plant; system previously noted estimated to cost \$50,000; Winters & Dove, Engrs., 311 Merchants' National Bank Bldg., Fort Smith, Ark. (See Machinery Wanted.)

Fla., West Palm Beach.—City, A. M. Lopez, Clerk, will open bids May 7 to construct lately-noted sewers; about 21,335 ft. 8, 10 and 12-in. with manholes, flush tanks, lampholes, etc.; J. B. McCrary Co., Engr., 1408 Third National Bank Bldg., Atlanta, Ga. (See Miscellaneous Construction and Machinery Wanted.)

N. C., Greensboro.—Irving Park Co. let lately-noted contract to J. Ed. Albright, Greensboro, for 4000 ft. sewer main.

N. C., Southern Pines.—Town votes May 4 on \$20,000 bonds to extend sewer and water systems; H. E. Foss, Clerk. (See Water-works.)

N. C., Southport.—City let following contracts for material for construction complete of sewer and water systems: Sewer pipe, Bibb Sewer Pipe Co., Macon, Ga.; cast-iron pipe, United States Cast Iron Pipe & Foundry Co. of New York; lead and jute, General Fire Extinguisher Co., Charlotte, N. C.; valves and hydrants, Columbian Hydrant & Valve Co., Chattanooga, Tenn.; towers and tank, Chicago Iron & Bridge

Co., Chicago, Ill.; flush tank, Pacific Flush Tank Co., Chicago; brick and lime, Roger Moore's Sons & Co., Wilmington, N. C.; cement, Alpha Cement Co., Savannah, Ga.; pumps, Platt Iron Works, Dayton, O.; air compressor, Ingersoll & Rand Co., New York; manholes, Southern Iron & Equipment Co., Birmingham, Ala.; reinforced steel work, Southern Engineering Co., Charlotte, N. C.; Carolina Cut Stone Co., Wilmington, N. C., one of contractors; motors to be let by contract; Consult. Engr. J. B. McCrary Co., Atlanta, Ga.; H. P. O'Hagan, City Engr. (Call for bids lately noted.)

N. C., Warrenton.—City votes May 17 on \$50,000 bonds for sewer system and water-works; Gilbert C. White, Charlotte, lately noted as submitting report.

Okla., Afton.—City Clerk will receive bids about May 1 to construct storm and sanitary sewer system; estimated cost \$37,000; plans by Benham Engineering Co., American National Bank Bldg., Oklahoma City. (Noted in January.)

Tenn., Lookout Mountain.—Town let contract A. W. Ingle & Co. to construct concrete sewage-disposal plant at West Ave. and Lyerly St.; design by Edward E. Betts Engineering Co.

Tenn., Cleveland.—City plans to issue \$75,000 bonds to construct sewer system. Address The Mayor.

Tex., Hillsboro.—City defeated \$5000 bonds to construct sewers. M. W. Lovell, Mayor. (Lately noted.)

Tex., Temple.—City will expend \$10,000 to extend sanitary sewer system. Address The Mayor.

Tex., Texarkana.—City's lately-noted \$14,000 improvement bonds will be applied to sewer extension, for which W. T. Jordan of Texarkana has contract; septic tank 10x10x40; C. E. Haydon, City Engr.

Va., Galax.—City, D. A. Robertson, Mayor, will construct sewers; Hudgins, Engr., Pulaski, Va. (See Water-works.)

Va., Luray.—Luray Land Corp. let contract Campbell Bros. to lay 2918 ft. sewers on Jamison and Amiss Sts. and Blue Ridge Ave.

### TELEPHONE SYSTEMS

Ga., Lafayette.—T. P. Nash is reported to supervise construction of rural telephone system 3½ mi. long.

Tenn., Waverly.—Farmers' Telephone Co., capital stock \$3000, incptd. by E. W. Sykes, W. L. Lattermer, W. H. Thompson and others.

### TEXTILE MILLS

Ala., Ft. Payne.—Hosiery.—W. B. Davis & Son let contract to Geo. A. Bushong for construction recently mentioned hosiery mill addition; 1 story 150x20, and 3 story 150x50 ft.; cost about \$20,000.

Franklin—Knit Goods.—Sunny South Overall Co. contemplates installation knitting machinery; has not purchased. (See Machinery Wanted.)

Ga., Thomaston.—Cotton Cloth.—Thomaston Cotton Mills has plans for 2-story 460x130-ft. additional mill; capacity, 25,000 spindles, 600 looms, etc.; install 15,000 spindles, etc., at first; also will build 2-story 130x73-ft. structure for 3000-spindle equipment; has ordered machinery; let contract for 2000 electrical H. P. to Central Georgia Power Co., Macon. (Lately noted.)

Ga., West Point.—Cotton Duck.—West Point Mfg. Co., Geo. H. Lanier, V.-P., will build additional mill; 20,000-spindle equipment; manufacture cotton duck; cost about \$500,000; immediate construction; J. E. Sirrine, Engr., Greenville, S. C., will prepare plans, specifications, etc.

N. C., Thomasville.—Combed Peeler Yarn.—Amazon Cotton Mills will, it is reported, build large addition; present equipment includes 12,000 ring spindles, electric-power drive, etc.

Tenn., Harriman.—Hosiery.—Harriman Hosiery Mills will increase capital stock from \$76,000 to \$100,000 and daily capacity from 700 to 1000 doz. prs.

Tenn., Newport.—Hosiery.—J. W. Kyker completed 40x20-ft. building for hosiery mill previously mentioned; installing 15 knitting machines, etc., to cost \$3000 to \$4000; at first operate by gasoline engine and later by electric power; belt drive; wants mixed yarns. (See Machinery Wanted.)

Tenn., Ridgedale.—Mercerized Cotton Goods.—Standard Processing Co., Chattanooga, improvements include increase of gassing facilities and of winding capacity from 28,000 to 35,000 or more lbs. weekly; new building (lately noted to be erected by Chandler & Chandler, 729 Hamilton Na-

tional Bank Bldg., Chattanooga, after plans by this firm) will be 2-story 60x84-ft. extension, slow-burning mill construction; cost \$7000.

### WATER-POWER DEVELOPMENTS

Ga., Thomaston.—Central of Georgia Power Co., Macon, Ga., is reported as to build transformer station and transmission system to convey electricity from Ocmulgee River development at Jackson via Barnesville to Thomaston; contemplates constructing hydro-electric plant on Flint River 12 mi. from Thomaston; has contract to furnish 2000 H. P. to Thomaston Cotton Mills, which will build \$250,000 addition and discard steam for electric power; extension to Thomaston is under consideration, but no details have been decided.

### WATER-WORKS

Ala., Elba.—City, W. M. Tucker, Mayor, let contract at \$3762.59 to Sullivan, Long & Haggerty, Bessemer, Ala., for lately-noted water main extension.

Ala., Gadsden.—City will arrange to construct proposed reservoir; plans to install electrical equipment, replacing steam plant in pumping station. Address Mayor Bellen-ger.

Ala., Northport.—City votes May 17 on \$16,000 bonds to construct water-works and sewer system. C. P. Bell, Mayor.

Fla., Key West.—A. H. McInnis, Secy. Key West Board of Trade, interested in plan to submit proposition to build artesian wells for water supply; is prepared to correspond with contractors and others who may be interested. (See Machinery Wanted.)

Ga., Rome.—Anchor Duck Mill will not contract for but is now constructing lately-noted 2400-gal. mechanical gravity filter plant; building 12x27x20 ft.; reinforced concrete construction; Wm. T. McCormick, Engineer, 12 Third Ave.

Md., Baltimore.—Board of Estimates authorized Water Board to prepare specifications for electrically-driven centrifugal pump at Eastern pumping station recommended by Ezra B. Whitman, Consult. Engr.; pump will have daily capacity of 25,000,000 gals. and cost \$25,000, of which \$20,000 is available. (Lately noted.)

N. C., Southport.—City let various contracts for material for construction complete of water and sewer system; Consult. Engr. J. B. McCrary Co., Atlanta, Ga.; H. P. O'Hagan, City Engr. (See Sewer Construction.)

N. C., Greensboro.—Irving Park Co. let lately-noted contract to J. Ed. Albright, Greensboro, for 3000 ft. 6-in. water main.

N. C., Southern Pines.—Town votes May 4 on \$20,000 bonds to extend water and sewer systems, erect or purchase municipal building and jail and fund indebtedness; H. E. Foss, Clerk.

N. C., Warrenton.—City votes May 17 on \$50,000 bonds for water-works and sewer system; Gilbert C. White, Charlotte, lately noted as submitting report.

Okla., Red Rock.—City will not construct lately-noted water-works until after bonds are sold; \$22,000 to be expended; Benham Engineering Co., Engr., American National Bank Bldg., Oklahoma City.

Tex., Cumby.—City will vote on \$10,000 bonds to extend water-works. Address The Mayor.

Tex., Floydada.—City, W. T. Montgomery, Mayor, let contract N. S. Sherman Machine & Iron Works, Oklahoma City, for water-works construction; cost \$20,000; includes well, pumping equipment, water tower, about 2½ mi. main pipe line, etc.; M. Griffin O'Neil & Sons, Engrs., Dallas, Tex. (Lately noted.)

Tex., Hillsboro.—City defeated \$5000 bonds to construct water-works; M. W. Lovell, Mayor. (Lately noted.)

Tex., Seguin.—Seguin Water-works Co., O. A. Gafford, Mgr., has plans and will ask bids in about 30 days for lately-noted repairs to works; will not purchase new pumping machinery.

Va., Galax.—City, D. A. Robertson, Mayor, will expend about \$16,000 to construct lately-noted water-works, sewer system and reservoir; erect pumping station, etc.; water-works capacity estimated at 44,000 gals.; reservoir (on high hill) to be filled by electrically-operated pumping equipment; Hudgins, Engr., Pulaski, Va.; dates for bids not set.

W. Va., Wheeling.—Ordinance Committee recommended calling election for May 15 to vote on \$640,000 bonds for installation of Smith slow sand filter system; estimates of cost as follows: Installing filter, 20,000,000

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gals. capacity, \$100,000; valve chambers and auxiliary pumping station with 4 centrifugal pumps, 100,000 gals. capacity pumps, \$60,000; concrete reservoir, 5,000,000 gals. capacity, \$60,000; 36 in. pipe line from reservoir to present pumping station, \$70,000; system complete, total, \$620,000; rights of ways, \$30,000 additional; Chas. B. Cooke, City Engr.

### WOODWORKING PLANTS

Ala., Alexander City—Sash, Doors and Blinds.—J. L. White of Sylacauga, Ala., and B. J. White and T. L. Craddock, both of Jacksons Gap, Ala., will establish sash, door and blind factory.

Ark., Hot Springs—Staves.—Gibbs & Austin Co., capital \$12,000, inceptd. by Ira R. Gibbs, R. B. Austin, J. P. Blackman and others; succeeds Gibbs & Austin; no changes in plants.

Ark., Little Rock—Handles.—Little Rock Handle Co. will rebuild burned plant; expend \$5000 for machinery; old plant had weekly capacity of 400 doz. handles, in addition to automobile spokes. (Lately noted.)

Fla., Jacksonville—Banana Cases.—Leigh Banana Case Co., Chicago, installed lately-noted branch plant to manufacture banana drums; all machinery supplied; W. A. Wiggs & Co., Jacksonville, are distribution agents for this territory.

Miss., Tylertown—Boxes.—Tylertown Box & Mfg. Co. organized by W. A. Boyd, J. C. Later, Carrie Boyd and others; will operate box factory.

N. C., High Point—Furniture.—Sam B. Coffin, Inc., will rebuild burned plant; plans call for building 100x200 ft.

Va., Rosslyn—Rosslyn Woodworking Co., capital stock \$25,000, inceptd. by Herman E. Burgess of Burgess & Parsons, Prest., 700 10th St. N. W.; Jas. L. Marshall, V.-P. and Treas.; Jas. T. Kenyon, Secy., all of Washington, D. C.

### FIRE DAMAGE

Ala., Ashland.—First National Bank Bldg., loss \$6000; Jordan Building, loss \$5000.

Ala., Athens.—Residence of Robt. M. Rawls, editor of Alabama Courier.

Ala., Carson.—Daniel Powell's sawmill.

Ala., Hackleburg.—J. H. Green's store, loss \$500; Hackleburg Mercantile Co.'s store, loss \$600; postoffice.

Ala., Selma.—Albert Meyer's residence at 31 Church St.; loss \$5000.

Ala., Silgo.—P. G. Hollingsworth's sawmill; estimated loss \$4000.

Ark., Dell.—W. P. Brandon's store and postoffice, loss \$4000; B. F. Coppage & Co.'s building, loss \$10,000; W. A. Osborne's store, loss \$6000; J. L. Bennett's store, loss \$5000.

Ark., Eudora.—F. Weis' store, V. O. Allen's store, Travelers' Hotel, Smith-McGehee Lumber Co.'s plant; total loss \$50,000.

Ark., Hampton.—H. B. Dunn's residence; loss \$3000.

Fla., Fort Pierce.—St. Lucie Ice Co.'s plant.

Fla., Maysville.—W. G. Sharp's building; Dr. M. P. Dendwyler's building; A. V. Hill's building, loss \$2500; total loss \$15,000.

Fla., Pensacola.—A. E. Turner Co.'s turpentine distillery; estimated loss \$40,000.

Fla., St. Petersburg.—Sholl Hotel; loss \$500.

Ga., Atlanta.—S. S. Frye's store; loss \$3000.

Ga., Atlanta.—W. O. Deans' residence on Peachtree St.

Ga., Rentz.—A. E. Hadden & Co.'s store; C. J. McMillan's store; Rentz Bank; total loss \$15,000.

Ga., Eatonton.—Gus DeLoach's garage.

Ga., Gainesville.—Residence in Nacoochee Valley, occupied by Dr. W. E. Paris and owned by Mrs. J. L. Johnston, Atlanta, Ga.

Ga., Maysville.—Boon Siddeth's store on Homer St.; Postoffice; Dr. Sharp's office and jewelry store; Woods Barbershop; Virginia-Carolina Fertilizer Co.'s offices; total loss \$20,000.

Ga., Tallapoosa.—Tallapoosa Hotel, owned by J. P. Gholston, Comer, Ga., and Dr. W. J. McCurdy, Tallapoosa.

Ga., Vienna.—J. J. Cooper's store; Henderson & Jordan's office; Dr. D. C. Daves' office; D. L. Henderson's office; J. B. Hall's store; total loss \$25,000.

Ga., West Point.—Roper Mule & Horse Co.'s stable; Johnson Grocery Co.'s store; Rutland Bakery; loss \$25,000.

Ky., Almo.—Winchester & Roberts' tobacco factory.

Ky., Henderson.—J. Milner's store, owned by John Barrett estate; loss \$8000.

Ky., Lawrenceburg.—Anderson County Courthouse, loss \$30,000 (address County Commrs.); Lawrenceburg Drug Co.'s store; Waterfall Bros.' store; M. Parker's bakery; Wm. Bottoms' building; Edw. Botts' residence; I. H. Duncan's residence; Bilger-Baxter Barber Shop; total loss \$125,000.

Ky., Louisville.—Seven frame buildings on Taylorsville Rd., owned by Edw. F. Weigel, Paul Jones Bldg.; loss \$5000.

Ky., Molonet.—J. T. Setser's store, dwelling and postoffice.

Ky., Rochester.—Albert Grubbs' residence. Ky., Smith Mills.—G. W. Powell's store; loss \$5000.

La., Lake Providence.—J. T. Cooper's residence near Lake Providence; loss \$3000.

La., Monroe.—Three residences on Texas Ave., owned by Mrs. McCoy; loss \$7000.

La., Monroe.—Mrs. Lon Smith's residence on Jackson St., occupied by H. Jack Brodnax.

Md., Dickerson.—Clayton Hoyle's barn and corncourse; loss \$3000.

Md., Easton.—Clayton Griffith's store; loss \$3000.

Miss., Port Gibson.—W. S. Beard's residence; loss \$5000.

Miss., Port Gibson.—Harris Frishman's store; Levy & Welch's building, owned by Marks Bros.

Miss., Starkville.—Mrs. Nanny Richey's residence.

Miss., Tupelo.—Gulf Compress Co.'s plant; estimated loss \$75,000.

Miss., Wesson.—Rowan Building, occupied by Wesson Enterprise; McCoy Pressing Shop; Case Barber Shop; Auding's Beef Market; H. M. Megee's store.

Miss., Wheeler.—School building. Address School Trustees.

Md., Jefferson.—Geo. T. Steiner's dwelling, barn and outbuildings; Clarence E. Hemp's barn; loss \$10,000.

N. C., Laurelsprings.—Residence of Mrs. J. C. Jones at Prather Creek.

N. C., Maxton.—Barber-Paschall Lumber Co.'s plant; estimated total loss \$25,000.

N. C., Middleburg.—Luther A. Jackson's building.

Okla., Bomar.—W. F. Matthews' building.

S. C., Bethune.—Dr. H. H. Holder's store; loss \$4500.

Tenn., Maysville.—Buildings of A. V. Hill and W. G. Sharp; loss about \$15,000.

Tenn., Sardis.—Millard Fillmore Pierce's hotel.

Tex., Corsicana.—Magnolia Refining Co.'s plant damaged and 16,000 bbls. oil burned; estimated loss \$200,000; main office, Galveston.

Tex., Dallas.—I. M. Griffin's residence was not burned, as lately reported.

Tex., Fort Worth.—Residence at El Paso and Henderson Sts., owned by W. R. Shankle; loss \$5000.

Tex., LaSalle.—E. J. Lauderdale's gin.

Tex., Penitas.—N. G. Cavazos' building and others; loss \$10,000.

Tex., Pittsburg.—Mrs. R. D. Huey's boarding-house on North Ave.

Tex., Talmadge.—R. F. D. from Thalia.—Talmadge Gin Co.'s plant; loss \$7000.

Tex., Temple.—Mrs. Wiley Saulsbery's residence at S. 5th St. and Avenue G; loss about \$3500.

Tex., Terrell.—S. J. Wilkerson's apartment-house; loss \$4000.

Tex., Waco.—Residence owned by Mrs. A. H. Newman, 709 Dutton St. and occupied by M. Moseley; loss \$5000.

Va., Berkley, Sta. Norfolk.—A. Zedd's 3 frame buildings at Liberty and Craig Sts.; loss about \$4000.

Va., Lawrenceville.—R. Turnbull's residence; loss \$7000.

Va., Portsmouth.—S. Lichty's dwelling at 607 Queen St.; H. L. Privett's dwelling at 606 Queen St., occupied by Mrs. Golda Kohn, loss \$3500; B. F. Howell's residence at 609 Queen St.

Va., Richmond.—F. H. Hardaway's residence; loss \$4000.

Va., Richmond.—Thos. J. O'Neill's residence at 713 Perry St., South Richmond; loss \$3000.

Va., Roanoke.—John J. Quinn's residence; loss \$3500.

Va., Suffolk.—Virginia Mills' peanut bull grinding plant.

Va., Winchester.—J. M. Lamp's flour mill at Greenspring; loss \$4000.

W. Va., Brilliant.—Dexter Coal Co.'s tipple; loss \$3000.

W. Va., Elverton.—Branch Coal & Coke Co.'s power-house and portion of trestle-work; loss \$20,000 to \$25,000.

W. Va., Pax.—McQueen & Smith's block.

occupied by J. F. Meadows, Smith Hardware Co., Hadden & McQueen and others.

### COLLAPSED

Ky., Lexington.—Building at 145 E. Short St., owned by Jas. P. Hendley.

Md., Frederick.—Byerly Bldg.; loss \$9000 to \$10,000.

## BUILDING NEWS

### BUILDINGS PROPOSED

#### APARTMENT-HOUSES

D. C., Washington.—Thos. L. Linney, 423 Q St. N. W., has plans by Wm. A. Vaughn, 8 7th St. S. E., Washington, for apartment-house at 424 Q St. N. W.; 2 stories, 43.8x31.8 ft.; brick; slag roof; steam heat; cost about \$10,000; construction by owner.

Fla., Miami.—Christiansen Bros. will erect building for apartments, etc. (See Stores.)

Fla., Miami.—August Geiger, Miami, prepared plans for apartment-house in Miramar; reinforced concrete; Italian style; 6 towers; 2 stories; 5 suites of 4 to 6 rooms on each floor; dining-room 27x30 ft.; 55 rooms and 10 baths; cost \$30,000.

Fla., Stuart.—Mayor McDonald will erect store and apartment building. (See Stores.)

Ga., Atlanta.—T. H. Abbey, 173 Spring St., will erect apartment-house at 165 Summit Ave.; 24 rooms; mill construction; shingle roof; electric light; grates; cost about \$8000; plans and construction by owner; construction begun; lately noted. (See Machinery Wanted.)

N. C., Asheville.—C. C. Millard will erect building for apartments, etc. (See Miscellaneous.)

Tex., Abilene.—J. T. Leeson is having plans prepared by M. L. Waller & Co., Abilene and Fort Worth, to remodel building for apartment-house; 2 stories; 8 apartments; cost about \$4500. (Lately noted under Stores.)

Tex., Abilene.—Mrs. Anna D'Spain is having plans prepared by M. L. Waller & Co., Abilene and Fort Worth, for apartment-house; 2 stories; 8 apartments; frame; tar and gravel roof; cost about \$7000; plans ready about May 1. (Lately noted.)

Tex., Austin.—M. O. Buntun will erect two-story apartment-house at 904 W. 9th St.; brick-veneer; cost \$5000.

Tex., Galveston.—I. Heidenheimer has plans by L. S. Green, Galveston, to convert building at 16th St. and Ave. I into apartment-house; 7 suites; steam heat; electric and gas lights; completion by June 1.

Va., Norfolk.—S. Friedberg will erect 2 brick apartment-houses at Chicoma and East Sts.; cost \$7000.

Va., Norfolk.—J. W. Thompson, 319 W. 32d St., will erect building for colored apartments; 2x48 ft.; brick; gravel roof; cost without mechanical equipment \$2500; plans and construction by owner.

Va., Suffolk.—Suffolk Apartment Construction Corporation inceptd. with \$25,000 capital stock; J. T. Benthall, Prest.; W. S. Beamon, V.-P.; G. S. P. Holland, Jr., Secy.-Treas.; has plans for apartment-house at Bank and Pinner Sts.; 45x116 ft.; semi-fireproof; felt-built gravel roof; low-pressure steam heat; 12 suites; hardwood floors; tile baths; electric lights; cost without mechanical equipment \$19,000; wiring, plumbing, heat, gas, etc., about \$6000; East & Hobbs, Archts., Norfolk. Address Archts. or Mr. Holland. (Lately noted.)

#### ASSOCIATION AND FRATERNAL

Ark., Little Rock.—Mutual Real Estate Co. has plans for building. (See Stores.)

Fla., St. Petersburg.—Knights of Pythias acquired site for erection of Castle Hall.

Fla., St. Petersburg.—Young Men's Christian Assn. is considering erecting building; C. G. Blanchard, Bangor, Maine, is interested.

Ga., Savannah.—Chatham Bank & Trust Co. is reported to convert building into lodge rooms, offices and stores. (See Stores.)

Ky., Lexington.—Y. M. C. A. acquired building at 169 N. Mill St. and will remodel for association purposes.

Ky., Lexington.—A. F. and A. M. have plans by Frank L. Smith, Lexington, to complete Masonic Temple, for which foundation is laid; pressed brick; stone trimmings; 3 stories and basement; 2 stories on lower floor; cost \$35,000; will soon call for bids.

Ky., Pikeville.—I. O. O. F., Pikeville Lodge No. 294, will erect building for lodgerooms, store and offices; 2 stories; 35x30 ft.; ordinary construction; metal roof; hot-water heat; cost about \$10,000; J. M. King, Archt., Ashland, Ky. Address T. G. Yost, Pikeville. (Lately noted.)

La., Gueydan.—Camp No. 659, W. O. W., plans to erect lodge building to cost about \$10,000 complete; Leo P. Bonnin, John G. Nellis, T. F. Lilley, H. L. Gueydan and Ben Isaacs, Com.

Md., Frostburg.—Frostburg Lodge, L. O. M., will erect lodge building.

Tenn., Jackson.—Y. M. C. A. will construct additional floor to building for dormitory; 24 rooms; brick; non-fireproof; gravel roof; steam heat; electric lighting; cost \$13,000; electric elevator, \$2000; R. A. Heavner, Archt., Jackson. Address C. Frank Warner, Jackson. (Lately noted.)

Tenn., Knoxville.—U. C. T. and T. P. A. will erect home; 4 stories and basement; fireproof; slate or asbestos roof; hot-water, steam or vapor heat; gas and electric light; cost about \$65,000; address T. B. Plyley, Knoxville. (Lately noted.)

Tenn., Memphis.—Knights of Pythias Building Assn., J. Alma Goodman, Treas., Madison and 3d Sts., is having plans prepared for building on 3d St.; 3 stories; lower floor for store and fraternal bank; upper stories for lodge; concrete; fireproof; brick; terra-cotta trimmings; vapor heat; cost \$30,000 to \$40,000; other details not decided. Address Mr. Goodman.

Tex., Beaumont.—Jefferson Lodge No. 55, K. of P., will erect building on Forsyth St. between Pearl and Orleans Sts.; 4 stories; brick; 60x90 ft.; lower floor for stores; second floor, offices; upper floors for lodge; cost \$40,000.

Va., Berkley, Sta. Norfolk.—B. B. L. Society, 758 Liberty St., South Norfolk, plans to erect building.

#### BANK AND OFFICE

Ga., Marshallville.—Citizens' Bank, J. W. Frederick, Prest., has plans by P. E. Dennis, American National Bank Bldg., Macon, Ga., for bank building; 1 story; fireproof; front of Washington hydraulic press brick and Indiana limestone; marble fixtures; cost \$5000; day labor.

Ga., Savannah.—Chatham Bank & Trust Co. is reported to convert building into stores, offices and lodge rooms. (See Stores.)

Ky., Audubon.—Iriquois Life Insurance Co., Sam. P. Jones, Prest., will remodel office building; details undecided; architect not selected. (Lately noted.)

La., New Orleans.—Finance & Realty Co., Gallier J. Capdeville, V.-P., is reported considering erection of office building.

Md., Tilghman.—Directors of New Building and Loan Assn., Easton, Md., will erect one-story brick bank building about 18x36 ft. at Tilghman's Island; N. E. Clark, Easton, Md., may be addressed.

Mo., St. Charles.—Fourth Ward Bank is reported to erect bank building; 38x50 ft.

S. C., Charleston.—C. B. Hulet, 189-91 E. Bay St., Charleston, is interested in proposition to build office and store building. (See Stores.)

S. C., Greenville.—Jamison & Morris are erecting building. (See Stores.)

Tenn., Memphis.—Knights of Pythias Building Assn. will erect lodge, store and bank building. (See Association and Fraternal.)

Tex., Beaumont.—Jefferson Lodge No. 55, K. of P., will erect building for offices, etc. (See Association and Fraternal.)

Tex., Post.—First National Bank has plans by R. E. Gilmore, Post, for \$10,000 bank building; bids being received; 1 story; colonial style. (Lately noted.)

Tex., Vernon.—Waggoner Nat'l Bank will let contract May 5 in office of Field & Clark, Archts., Wichita Falls, Tex., to erect bank building.



## CHURCHES

Ala., Phenix.—St. Patrick's Church, Rev. John P. Moulleaux, priest in charge, Opelika, Ala., will erect priest-house; frame; metal roof; day labor; T. W. Smith & Co., Archt., Murrah Bldg., Columbus, Ga. (Lately noted.)

Ark., Pine Bluff.—St. Joseph's Catholic Church is having plans prepared by Frank M. Blaisdell, Bankers' Trust Bldg., Little Rock, for building.

D. C., Washington.—Keller Memorial Lutheran Church, Maryland Ave. and 9th St. N. E., has plans prepared by MacNeil & MacNeil, 414 Union Trust Bldg., Washington, for addition to church; 45x55 ft.; fireproof; slate roof; steam heat; electric light; cost about \$10,000; bidders are Walter B. Avery, 632 G St. N. W.; John T. Turner, 926 25th St.; Arthur M. Poynton Co., 715 14th St. N. W.; Wm. A. Kimmel, 615 Evans Bldg.; Wm. E. Mooney, 505 Evans Bldg.; Beahm & Rice, 617 14th St. N. W.; Boyer & Smith, 214 12th St. N. W.; Wm. S. Spencer, 216 Bond Bldg.; Andrew Murray, 729 12th St. N. W.; John B. Gibbs, 1623 L St. N. W.; all of Washington; bids due Apr. 22. (Noted in Mch.)

Fla., Apalachicola.—Negro Methodist Episcopal Church plans to complete building; pressed brick and stone facing. Address The Pastor.

Fla., Boynton.—Methodist church will erect addition to building; concrete construction. Address The Pastor.

Fla., Miami.—First Methodist Episcopal Church South will receive bids until May 10 to erect building; 90x97 ft.; asphalt shingle roof; cost \$35,000 without mechanical equipment; John Galsford, Archt., Memphis, Tenn. Address Rev. J. R. Cason, Miami. (Lately noted.)

Ga., Auburn.—Christian Church of Georgia will acquire Ferry Rainey Institute and expend \$15,000 for improvements; Rev. John H. Wood, Atlanta, Ga., Secy. of Christian Church Missionary Assn., in charge of movement.

Ga., Columbus.—City Com. on Cemeteries, Thos. S. Roberts, Chrmn., will receive bids until Apr. 28 to erect chapel in Riverdale Cemetery; brick; stone trimmings; 70x32 ft.; metal or tile roof; arcade in center; cost \$4000 to \$4500; Chas. F. Hickman, architect, Columbus; plans and specifications at office of W. C. Campbell, Supt. of Public Works; separate bids for plumbing. (Lately noted.)

Ga., Savannah.—Immanuel Baptist Church will remodel building; F. Wells, Chrmn. of Building Com.

Ky., Middlesboro.—First Baptist Church will erect church and Sunday-school building; 55x112 ft.; brick, stone and wood; Cary or asbestos roof; steam heat; electric light; cost \$25,000; R. F. Graf & Sons, Archts., Knoxville, Tenn.; A. B. Miller in charge of construction, Middlesboro; no general contractor; construction begun. (Previously noted.)

Md., Hyattsville.—St. Matthews parish has plans by Hunter & Bell, Southern Bldg., Washington, D. C., for church and parish hall as memorial to Bishop Pinkney; cost \$12,000; construction to begin June 1; completion in November. (Noted in December, 1913.)

Mo., Kansas City.—Church of the Assumption has plans by W. Hilton Smith, Kansas City, for \$40,000 brick and stone Gothic style church; 60x122 ft.; also school building and 10-room residence adjoining; Rev. W. J. Connolly, pastor.

Mo., St. Louis.—First German Presbyterian Church, Rev. H. de Beer, pastor, 2108 Allen Ave., will erect building at Sidney and Minnesota Sts.; mill construction; cost about \$35,000; construction to be begun this summer; Archt. not selected. (Lately noted.)

N. C., Winston-Salem.—Grace M. E. Church has tentative plans for building at Woodland Ave. and W. 4th St.; cost \$15,000 to \$20,000.

N. C., Winston-Salem.—Reformed Church of United States, Dr. A. M. Holshouser, pastor, will erect church and parsonage; church 40x60 ft.; parsonage 30x50 ft.; fireproof; steam heat; electric light; cement sidewalk; cost of church about \$15,000; parsonage about \$2500; architect not selected; address pastor; noted in Jan. (See Machinery Wanted.)

Okla., Sand Springs.—Baptist congregation plans to erect building; Rev. L. E. Floyd and C. E. Cannaday, respectively, of First and Second Baptist churches, Tulsa, Okla., are interested.

Okla., Tulsa.—Grace M. E. Church, Rev. L. C. Murray, pastor, 1417 E. Hodge St., will complete building at Trenton and E. 3d Sts.; 78x55 ft.; ordinary construction; composition roof; cost about \$12,000. (Lately noted.)

Tenn., Springfield.—Methodist Church, Rev. D. M. Ausmus, pastor, will erect building; cost about \$25,000; will also install pipe organ.

Tex., Victoria.—Presbyterian Church, C. S. E. Holland, Chrmn. Bldg. Comm., indefinitely postponed erection of building. (Previously noted.)

Va., Norfolk.—Epworth M. E. Church will erect Sunday-school building; 70x70 ft.; ordinary construction; tin roof; steam heat; electric lighting; cost \$25,000; bids opened Apr. 22; Mitchell & Wilcox, Archts., Norfolk. (Previously noted.)

## CITY AND COUNTY

Ala., Jacksonville.—Alms-house.—Calhoun county will build colored almshouse; 14 to 18 rooms; brick and concrete block; galvanized metal tile roof; cost about \$6500. (Lately noted.)

Fla., Arcadia.—Library.—City plans to erect Carnegie library. Address The Mayor.

Fla., Fort Myers.—Fire Station.—John W. Owens, City Clerk, receives bids until May 7 to erect building for fire station; plans and specifications at office of Mr. Owens in Heitman Bldg., and Western Union Telegraph Co.'s office.

Fla., Jacksonville.—Offices.—Board of Port Commrs., E. W. Bruce, Engr., will erect administration building at site of proposed dock terminals for use of engineers; brick; concrete trimmings; metal shingle roof; 2 stories; provide for additions; cost not more than \$5000.

Fla., Miami.—Fire Station.—City will erect fire station on Ave. J, between 15th and 16th Sts.; site 50x100 ft. Address The Mayor.

Fla., St. Petersburg.—Concordium.—Board of Trade will petition City Commrs. for election on \$150,000 bonds to erect concordium; tentative plans by Henry Dupont, St. Petersburg, call for structure 280x218 ft.; auditorium to seat 5000; sliding doors to permit dividing into 30 booths, 30x15 ft., around central auditorium.

Ga., Savannah.—Library.—Library Commission is having plans prepared by H. W. Witcover, Savannah, for Carnegie library; marble or granite construction.

Ky., Louisville.—Fire Station.—Board of Public Safety, Ed. T. Tierney, Chrmn., receives bids until May 4 to erect engine-house at Bardstown Rd. and Maryland Ave.; plans and specifications at office of Building Inspector, City Hall.

Mo., St. Joseph.—Library.—St. Joseph School Dist. votes Apr. 24 on \$25,000 bonds for library. (See Schools.)

N. C., Southern Pines.—Municipal.—Town, H. E. Foss, Clerk, votes May 4 on \$20,000 bonds to erect or purchase municipal building and jail. (See Water-works.)

S. C., Camden.—Library.—City is having plans prepared by Wilson & Sompayrac, Columbia, S. C., for Carnegie library building; plans and specifications completed Apr. 17; bids received about May 4.

S. C., Greenville.—Jail.—Greenville County Jail Commrs., J. I. West, Chrmn., will receive bids until May 10 to erect jail, exclusive of steel work; also at same time for steel work for same; plans and specifications at office of Joe T. Lawrence, Archt., Greenville; further information from said commission or Archt.; cost about \$30,000. (Lately noted.)

Tex., San Marcos.—Jail.—Hays County Commissioners are reported considering erection of jail, or remodeling present structure and erecting residence for jailor.

Tex., Victoria.—Fire Station.—City, C. Wertheimer, Secy., voted lately-noted \$30,000 bonds for erection central fire station.

Va., Lawrenceville.—Municipal Offices.—Meredith Land Co. will erect building; upper floor probably for offices. (See Government and State.)

## COURTHOUSES

Ga., Chatsworth.—Murray county, D. R. Dunn, Chrmn. Com., will erect courthouse; 50x82 ft.; fireproof; gravel roof; steam heat or stoves; cost \$40,000; Alexander Blair, Archt., Macon, Ga.; bids opened May 25. (Noted in Feb.)

Mo., Kennett.—Bids received by Lee Shelton, Commr., until Apr. 17 to erect brick addition to Dunklin County Courthouse; approximately 28x30 ft.; 2 stories; 20,000 cu. ft. floor space; plans and specifications at

office of County Clerk and A. Meyer, Archt., St. Louis.

Mo., Ozark.—Christian county will vote on \$50,000 bonds to erect courthouse. Address County Commrs.

S. C., Greenville.—David B. Traxler, Chrmn. Courthouse Comm., will receive application from architects who desire to submit plans and specifications for \$60,000 courthouse. (Lately noted.)

Tex., Beaumont.—Jefferson County Commrs. approved plans by Babin & Beck, Beaumont, for annex to courthouse; 3 stories; cost about \$25,000; bids opened May 1; will also expend \$10,000 for refurbishing entire courthouse. (Lately noted.)

Tex., El Paso.—El Paso County Commrs. will have plans prepared by Trost & Trost, El Paso, for courthouse and jail. (Lately noted.)

W. Va., Madison.—Boone County Commrs. selected H. Rus Warne, Charleston, W. Va., Archt. for proposed courthouse.

## DWELLINGS

Ala., Alabama City.—J. E. Prince, overseer spindle department Dwight Mfg. Co., will erect one or more dwellings on Mitchell Hill.

Ala., Alabama City.—W. H. Mount will erect dwelling.

Ala., Athens.—Robt. M. Rawls will erect dwelling on S. Clinton St. to replace building recently reported burned; 2 stories; frame; metal shingle roof; electric light; cost about \$4000; architect and contractor not selected.

Ala., Birmingham.—M. B. McGee will erect 2-story frame residence on 32d St. between 10th and 11th Sts.; cost \$3000.

Ala., Birmingham.—W. S. Cooper will erect 8-room dwelling; brick veneer; composition roof; electric light; cost about \$3000. (Lately noted.)

Ala., Sylacauga.—Dr. R. D. Porch has plans by Leila Ross Wilburn, 305 Peters Bldg., Atlanta, for residence; 2 stories; frame; hardwood floors; furnace heat; electric lights; cost about \$4000.

Ark., Jonesboro.—Dan L. Jones will rebuild residence; about 8 rooms; cost \$3000; details not determined. (Lately noted burned.)

Ark., Little Rock.—Miss Minnie Phipps will erect 2-story residence at 415 E. 9th St.; cost \$4000.

Ark., Little Rock.—J. N. Maxley will erect 2 frame residences at 2824 Gaines St.; cost \$3000.

Ark., Little Rock.—W. B. Worthen will erect frame residence at 2100 Izard St.; cost \$2500.

Ark., Newport.—T. J. Gregg, Mgr. Lesser-Goldman Cotton Co., will erect residence.

D. C., Washington.—Chas. E. Wire, 1413 H St. N. W., will erect 2 dwellings; 1 at 5500 39th St. N. W., 1 at 3901-3 Livingston St.; 2 stories; brick; cost \$15,000.

D. C., Washington.—S. Koblin, 331 H St. S. W., has plans by Isaac Tepper, 504 E St. N. W., Washington, for 7 dwellings on 12th St. N. E.; 12.4x39 ft.; ordinary construction; tin roof; gas heat; cost \$1200 each; construction by owner.

D. C., Washington.—J. H. Newbold has plans by T. J. D. Fuller, 806 17th St., Washington, for moving and remodeling dwelling on Q St. near Q St. bridge; move section 50x40 ft.; stone foundation; brick superstructure; rebuild 2 wings, 11x18 ft. each; brick; decked for sleeping porch; tin roof; interior remodeling.

D. C., Washington.—David Derzavitz is having tentative plans prepared by C. L. Harding, 1125 Woodward Bldg., Washington, for dwelling at Connecticut Ave. and Kanawha St., Chevy Chase Ter.; brick; cost about \$8000.

D. C., Washington.—Harris Shapero, 2501 Georgia Ave. N. W., has plans by W. Edgar Houser for 3 dwellings; 1 at 2737 Sherman Ave., 2 at 784 Girard St.; former 18x26.8, latter 14x26.8 ft.; 2 stories; stone and brick; tin roof; hot-water heat; cost \$6000; construction by owner.

D. C., Washington.—C. W. King, 930 New York Ave. N. W., has plans by N. R. Grimm, Bond Bldg., Washington, for 3 dwellings at 1873-75 Monroe St.; 2 stories, 16.8x31.6 ft.; brick; tin roof; hot-water heat; electric light; cost \$10,000; construction by owner.

D. C., Washington.—Henry C. Emrich, 647 South Carolina Ave., has plans by C. C. Dunkle, 141 Kentucky Ave. N. E., Washington, for dwelling at 649 South Carolina Ave.; 2 stories; 21.7x36.1 ft.; brick; tin roof; hot-water heat; electric light; cost \$3100; construction by owner.

D. C., Washington.—L. W. Gibson, 1211 C St. S. E., has plans by W. S. Plager, 103 2d St. N. E., Washington, for dwelling at 220 Kentucky Ave. S. E.; 2 stories, 22x26 ft.; brick; slag roof; cost \$3000; construction by owner.

D. C., Washington.—G. W. Barkman, 900 Massachusetts Ave. N. E., has plans by L. Williams for 5 dwellings at 1101-9 7th St. N. E.; 2 stories, 17x32 ft.; brick; hot-water heat; electric light; cost \$11,500; construction by owner.

D. C., Washington.—Winfield Preston, 1718 8th St. N. W., has plans by Jones & Bubbs, 611 Riggs Bldg., Washington, for 8 dwellings at 4208-22 7th St. N. W.; 2 stories, 18.9x32 ft.; brick; hot-water heat; electric light; cost \$24,000; construction by owner.

Fla., Clearwater.—Dr. T. W. Proctor, Sagamore, Mass., is reported to erect residence.

Fla., Clearwater.—F. W. Morgan will probably let contract about May 1 to erect residence; 2 stories; ordinary construction; shingle roof; cost \$6000; Lester Avery, Archt., Box 346, Clearwater, who may be addressed. (Lately noted.)

Fla., Eustis.—W. S. DeLong, Adv. Mgr. of Calumet Baking Powder Co., Chicago, Ill., will erect 6-room bungalow.

Fla., Gulfport.—Frank J. Stamm, St. Petersburg, Fla., plans to erect several cottages.

Fla., Jacksonville.—E. F. Rainey will erect 3 two-story frame dwellings on 11th St. between Laura and Silver Sts.; cost \$3000.

Fla., Jacksonville.—Wm. A. Macduff is having plans prepared by W. B. Camp, Jacksonville, for dwelling on St. Johns Ave.; Italian renaissance; 54x32 ft.; stucco on hollow tile; Spanish tile roof; hot-water heat; electric light; cost about \$25,000; plans ready about May; address Archt.

Fla., Lakeland.—Mrs. W. B. Croft is having plans prepared by A. J. Poter, Lakeland, for dwelling; ordinary construction; shingle roof; cost, without mechanical equipment, \$2500.

Fla., Orlando.—C. A. Hovey will erect 12 bungalows around open court with cement walks connecting same; private sewerage system.

Fla., Orlando.—L. Percival Hutton, Orlando, is preparing plans for number of residences; frame and brick; slate and tile roofs; wood porch columns; hot-air and steam heat; tile floors; electric fixtures.

Fla., Jacksonville.—W. C. Hodges, 1018 Heard Bldg., let contract to F. C. Gilmore, Tallahassee, to erect dwelling at Point La Vista, South Jacksonville; cost \$16,000.

Fla., St. Petersburg.—Mayor J. G. Bradshaw will erect residence on Ingleside Ave.; concrete.

Fla., St. Petersburg.—H. J. Winchell will erect residence on Ninth Ave.

Fla., Tampa.—D. B. Givens will erect two-story frame residence at Willow and Swann Sts.; cost \$2350.

Fla., Thonotosassa.—C. W. Morgan, Gatum, Panama, arranged with Chas. K. Rogers, Thonotosassa, to erect residence.

Ga., Atlanta.—J. C. Eason (Agt.) will erect 6 frame dwellings at 249-65 Linden St.; day labor; cost \$6000.

Ga., Atlanta.—T. H. Abbey, 173 Spring St., will erect number of dwellings. (See Machinery Wanted.)

Ga., Atlanta.—J. C. Buchanan will erect 1-story 6-room frame dwelling at 281 St. Charles Ave.; cost \$3750.

Ga., Atlanta.—Asa G. Candler will erect residence in Druid Hills.

Ga., Atlanta.—J. S. Slicer is having plans prepared by A. N. Canton, Atlanta, for residence on Peachtree Circle, Ansley Park; cost about \$12,000.

Ga., Cedartown.—J. E. Mundy has plans by Fritz Wagner, 1208 Fourth National Bank Bldg., Atlanta, for residence; frame; hot-water heat; day work; cost \$5000.

Ga., Cuthbert.—D. B. Teabaut will erect residence; 9 rooms; mill construction; shingle roof; grates; electric lights; tile sidewalks; cost \$4000 without mechanical equipment; plans by owner.

Ga., Douglasville.—H. C. Dorris has plans by Fritz Wagner, 1208 Fourth National Bank Bldg., Atlanta, for residence; frame; day labor; cost \$4000.

Ga., Decatur.—A. E. Dowman will erect residence.

Ga., Fitzgerald.—John Dorminy, Broxtown, Ga., will erect residence; 2 stories; frame; 12 rooms; furnace heat; hardwood floors; probably wood shingle roof; art glass; port cochere; greenhouse; garage; cost about \$10,000; T. F. Lockwood, Archt., Murrah

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Bldg., Columbus, Ga.; construction probably under supervision of owner.

Ga., Macon.—E. A. Sheridan will erect residence; 2 stories; 10 rooms; frame; Alexander Blair, Archt., Georgia Casualty Bldg., Macon.

Ga., Richmond.—Jos. E. Willeford will erect 2-story detached brick dwelling at 515 N. 23d St.; cost \$5500.

Ga., Thomasville.—S. A. Roddenberry will erect residence.

Ky., Lexington.—S. D. Averitt will erect residence on Washington Ave.; cost \$3000.

Ky., Lexington.—J. S. McHargue will erect residence on Transylvania Ave.; cost \$3000.

Ky., Louisville.—Catherine Davis will erect brick-veneer dwelling at 1374 S. Brook St.; cost \$3500.

Ky., Louisville.—J. E. O'Reilly will erect brick dwelling at 642 S. 38th St.; cost \$3000.

Ky., Mayville.—Frank Burgoyne will erect bungalow.

Ky., Pikeville.—W. H. McCulloch will erect store and dwelling; 2 stories.

La., New Orleans.—W. J. Hughes will erect residence on Metairie Heights; bungalow style.

La., New Orleans.—L. G. Link of L. G. Link Co. will erect bungalow residence at Peniston and Howard Sts.

Md., Baltimore.—Isaac Cooper will erect 10 dwellings at Rosedale and Brighton Sts.; 2 stories; 14x50 ft.; brick; galvanized-iron roof; steam heat; cost \$16,000.

Md., Baltimore.—Peter Grogan estate, Preston St. and Milton Ave., has plans by Jos. F. Hirt, 829 N. Luzerne St., Baltimore, for 21 dwellings at 1290-20 and 1291-19 N. Luzerne St.; 2 stories; 14x45 ft.; brick; cost \$23,500.

Md., Baltimore.—J. P. Brandau & Bros., 700 E. North Ave., have plans by C. Brandau, 8 S. Pulaski St., Baltimore, and will erect 9 dwellings on 30th St. between Guilford Ave. and Barclay St.; 2 stories; 22.5x34 ft.; brick; slag roof; steam heat; cost \$16,000.

Md., Baltimore.—Raymond S. Williams is having plans prepared by Edw. L. Palmer, 408 Roland Ave., Roland Park, Md., for proposed dwelling in Guilford; 35 ft. square; stucco on brick; slate roof; hot-water heat; electric light; bidders are G. Walter Tovell, Eutaw and McCulloch Sts.; E. G. Turner, 15 E. Fayette St.; Gustavus Stohr, 2551 Pennsylvania Ave.; Gladfelter & Chambers, 729 Roland Ave., all of Baltimore, and Roland Park Co., 408 Roland Ave., Roland Park, Md.; bids due Apr. 26.

Md., Baltimore.—Reliance Realty Co., Falls Rd. near Merryman Ave., has plans by Callis & Callis, 2055 Kennedy Ave., Baltimore, for 8 dwellings on Hohenhoff Parkway near Falls Rd.; 15x100 ft.; 2 stories; brick; tin roof; hot-air heat; electric light; cost \$1500 each; construction by owner; also having plans prepared by same architects for 10 dwellings on Falls Rd. near 41st St.; 14x95 ft.; brick; tin roof; hot-air heat; electric light; cost about \$1600 each; plans of latter to be ready about May 10.

Mo., Kansas City.—H. L. Donaldson will erect dwelling at 5724 Central St.; 30x38 ft.; mill construction; shingle roof; warm air heat; electric light; cost \$6000. (Lately noted.)

Mo., Kansas City.—Home Investment Co., 615 Commercial Bldg., is erecting 51 dwellings in 4100 block Prospect Ave.; 6 and 8 rooms; shingle roof; furnace heat; cost \$3000 each; construction begun in January. (Lately noted.)

Mo., Kansas City.—G. M. Husser, 2455 Park Ave., has plans by Shepard & Belcher, Kansas City, for residence at 137 W. 61st St.; 30x28 ft.; stucco; shingle roof; probably hot-water heat; lighting plant to cost \$500; cost \$5000 without mechanical equipment.

N. C., Blowing Rock.—Blowing Rock Development Co. will erect number of cottages.

N. C., Blowing Rock.—J. W. Cannon, Concord, N. C., will erect \$15,000 residence.

N. C., Charlotte.—F. M. Miller will erect residence.

N. C., Charlotte.—H. L. Taylor will erect residence.

N. C., Charlotte.—R. A. Myers will not erect dwelling at present. (Lately noted.)

N. C., Charlotte.—H. J. Dunavant will erect residence in Myers Park.

N. C., Goldsboro.—D. H. Bland has plans by Lella Ross Wilburn, 305 Peters Bldg., Atlanta, for residence; 1½ stories; frame; stone foundation; hardwood floors; electric lights; cost about \$3300.

Okla., Ardmore.—G. A. Ramsey will erect residence at C St. and 1st Ave.

Okla., Ardmore.—W. A. Easley will erect residence.

Okla., Ardmore.—W. B. Johnson is reported to erect residence at 3d and C Sts.

Okla., Chickasha.—Ben F. Johnson is erecting residence; Spanish style bungalow; hollow tile; stucco finish; tile roof; steam-heating and hot-water plants in basement; cost \$10,000.

Okla., Chickasha.—F. R. Linton is erecting residence at 15th St. and Minnesota Ave.; brick and stucco finish; granite porch pillars and foundation; 2 stories; 9 rooms; heating plant, laundry, etc., in basement; garage.

Okla., Oklahoma City.—M. T. Ables is having plans prepared by Maurice Jayne, Oklahoma City, for \$5000 residence.

S. C., Cedar Springs.—W. W. Donald will receive bids to erect bungalow; plans and specifications at office of R. B. Paslay, Spartanburg, S. C.

S. C., Rock Hill.—W. L. Barron will erect residence.

Tenn., Chattanooga.—Geo. Hall has plans by Clarence P. Jones, 630 Hamilton Bank Bldg., Chattanooga, for dwelling; brick and stucco; slate roof; hot-water heat; cost about \$6000.

Tenn., Knoxville.—Mrs. F. A. Roberts is having plans prepared by S. H. Lynn, Box 315, Knoxville, to remodel dwelling.

Tenn., Memphis.—Harry Branau will erect 6 bungalows on Garland Ave.; cost about \$3500 each.

Tenn., Nashville.—Malcolm R. Patterson will erect residence.

Tex., Abilene.—C. W. Bacon has plans by M. L. Waller & Co., Abilene, for dwelling on N. 5th St.; 2 stories; brick or tile and stucco; oak trimming; shingle roof; heating undecided; electric light; cost about \$10,000. Address owner. (Lately noted.)

Tex., Austin.—A. O. Watson, Archt., Austin, prepared plans for 2-story and attic brick-veneer residence; bids opened Apr. 17.

Tex., El Paso.—Mrs. Thos. Van Epps will erect residence in Kern Place Addition; cost \$7500.

Tex., El Paso.—J. C. Huff will erect brick bungalow in Franklin Heights Addition; cost \$3500.

Tex., El Paso.—Geo. W. Sharp will erect brick bungalow in Alexander Addition; cost \$3800.

Tex., El Paso.—Mayfield Building & Improvement Co., First National Bank Bldg., will erect two 6-room bungalows on Montana St.; brick; shingle roof; hot-air heat; cement sidewalks; cost \$3500 each. (Lately noted.)

Tex., Galveston.—J. H. Phipps will erect 3 frame cottages at 39th St. and Ave. K; cost \$3000.

Tex., Houston.—J. E. Fisher will erect residence on Caroline St.; cost \$5566.

Tex., Houston.—B. W. Ralston will erect residence in Bute addition; cost \$4000.

Tex., San Antonio.—O. O. Luter will erect two 2-story dwellings on E. Locust St.; cost \$6500.

Tex., Waco.—W. H. Staton is having plans prepared by C. D. Hill & Co., Dallas, for dwelling and garage; 12 rooms; tile and brick construction; red tile roof; hot-water heat; hardwood floors, birch and oak; vacuum cleaner; total cost about \$30,000.

Va., Dinwiddie.—T. M. Netherland will erect dwelling; frame; 2 stories; steam heat; electric wiring; acetylene gas fixtures; cellar; outbuildings, etc.; cost \$3500 to \$5000; final plans not made.

Va., Fredericksburg.—W. B. Jenkins will probably erect residence.

Va., Melfa.—Vernon W. Phillips has plans by Philip B. Moser, Norfolk, for residence; 44x44 ft.; 2 stories and basement; frame; 10 rooms and bath.

Va., Norfolk.—W. H. H. Trice has plans by H. W. Simpson, Paul-Gale-Greenwood Bldg., Norfolk, for double dwelling on Armstead Bridge Rd.; brick; Barrett's 5-ply specification roof; steam heat; bids opened Apr. 21.

Va., Norfolk.—John I. Clark will erect 2-story brick residence at Bolsevalne and Orapax St.; cost \$5000.

Va., Richmond.—James S. Frances will erect three 2-story brick dwellings on Temple St.; cost \$16,000.

Va., Richmond.—J. Lee Davis will erect 4 two-story brick dwellings on Davis Ave. between Main and Cary Sts.; cost \$8000.

Va., Richmond.—Lerry Carey will erect 2-story brick dwelling on Main St.; cost \$3500.

W. Va., Fairmont.—Four States Coal & Coke Co. will erect number of operatives' dwellings at mines at Annabelle.

## GOVERNMENT AND STATE

Ark., Arkadelphia.—Postoffice.—Treasury Dept., Geo. O. Van Natta, Acting Supervising Archt., Washington, approved plans by Frank M. Blaisdell, Little Rock, Ark., for postoffice building; has \$55,000 appropriation. (Noted in December.)

Fla., Pensacola.—Aeronautic Station.—Bureau of Yards and Docks, Navy Dept., H. R. Stanford, Ch. of Bureau, Washington, D. C., will receive bids until May 1 for toilet building and alterations in buildings Nos. 16, 18 and 34 at Navy Aeronautic Station; plans and specifications on file with Bureau at Washington, and Officer in Charge, Pensacola.

Md., Beltsville.—Farm.—Department of Agriculture, D. F. Houston, Secy., Washington, D. C., receives bids until Apr. 30 to erect 2-story brick and concrete building for U. S. experimental farm; plans and specifications at office of Clerk of Bureau of Animal Industry Dept. of Agriculture, Washington.

Mo., Chillicothe.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, opens bids June 3 to erect postoffice, including mechanical equipment and approaches; drawings and specifications may be had after Apr. 22 from Custodian of Site or office of Supervising Archt.

Va., Fort Monroe.—Stables, etc.—Constructing Quartermaster opened bids for alterations to casemates, addition to stables, lighting and plumbing; following are low bidders: R. V. Richardson, Hampton, Va., at \$6694, for alterations to casemates and \$3737 for addition to stable; W. G. Norris, Phoenix, Va., at \$1750 for plumbing casemates; S. J. Watson, Jr., Hampton, Va., at \$485.35 for lighting casemates and \$80.85 for lighting stables; Alexander Weston, Hampton, Va., at \$85 for screening casemates. (Lately noted.)

## HOSPITALS, SANITARIUMS, ETC.

Okla., Tulsa.—Tulsa Hospital Assn. will erect addition to hospital; 2 stories; 30x30 ft.; 2 and 3 stories.

Tenn., Chattanooga.—City has plans by W. H. Sears, Chattanooga, J. D. Alsop, Asso. Archt., for improvements to Erlanger Hospital; will erect 4-story administration building; fireproof; also remodel present structure, provide sun parlors, etc., and erect building for contagious diseases; improvements comprise 5 or 6 buildings; composition roof; steam heat; electric elevator; fireproof or semi-fireproof; bids opened about May 15; cost about \$100,000. (Previously noted.)

Tenn., Morristown.—Hospital Improvements Co. organized with J. N. Fisher, Pres.; Dr. P. L. Henderson, Secy.; W. H. Mullins, Treas.; is having plans prepared for hospital building on High St.; brick veneer; about 30 rooms; site 200x225 ft. (Lately noted.)

Tex., Beeville.—County Commrs. will consider election on \$30,000 bonds to erect hospital.

W. Va., Moundsville.—State Board of Control, Charleston, W. Va., will soon begin erection of \$10,000 tubercular addition to hospital inside walls of penitentiary.

## HOTELS

Fla., Fort Pierce.—Charles S. Emerson, Pres. and Gen. Mgr. of News Publishing, is interested in erection of hotel; having preliminary plans prepared by W. B. Camp, Board of Trade Bldg., Jacksonville; details not definite.

Ga., Savannah.—Hibernia Realty Co., incorporated with \$35,000 capital stock by Jos. A. Gallina, Richard T. Burch, T. T. Dooley and others, is reported to remodel building at Bull & Broughton Sts.; lower floor for stores; upper floors for hotel.

Ga., Tallapoosa.—J. P. Holston, Comer, Ga., and Dr. W. J. McCurdy, Tallapoosa, are considering erection of hotel and store building or store building to replace Tallapoosa Hotel, noted damaged by fire.

Ky., Pikeville.—Tom Williamson will erect 3-story addition to Hotel Jefferson.

Mo., Kirksville.—Commercial Club is reported contemplating erection of hotel estimated to cost \$75,000; W. I. Pool is interested.

Tex., Fort Worth.—J. C. Ingram is having plans prepared by Van Slyke & Woodruff, Oklahoma City, for hotel on Main St. between 10th and 11th; 7 stories and basement; 200x35 and 75x105 ft.; about 400 rooms, about 85 per cent. with private baths; sample rooms; ballroom, 40x80 ft.; heating and refrigerating plants; also considering electric plant; reinforced concrete, steel, Alginate stone and tapestry brick construction;

ice plant; private water system; stores on lower floor; 2 high-speed passenger elevators, 1 high-speed service elevator and 1 freight elevator; ballroom and roof garden on top of building; skylights, ornamental iron, marble, tile mosaic, wire and art glass fireproof windows; fire escapes, etc.; reported cost, \$500,000.

## MISCELLANEOUS

Ark., Pine Bluff.—Clubhouse.—Pine Bluff Golf and Country Club was incptd. with \$10,000 capital stock; will erect clubhouse and golf course.

D. C., Washington.—Hugh Wallis has plans by B. Frank Meyers, Bond Bldg., Washington, for alterations to building at 613 15 12th St. N. W. for cafe; 50x75 ft.; fireproof; slag roof; steam heat; electric light.

Fla., St. Petersburg.—Bathhouse.—H. A. Lawrence, Jr., and others are reported to expend \$13,000 to improve the Spa; will provide swimming pool 40x100 ft. with filtered salt water 4 to 7 ft. deep, erect addition to bathhouse, construct 2-story porch, etc.

Fla., St. Petersburg.—Terminal Building, etc.—J. Franklin Meehan prepared plans for improvements to Jungle Park, to include terminal station 60x20 ft., with 10-ft. verandas around and provision for refreshment concessions; palmetto logs and slabs and stucco work; waiting-room at end of pier 18x24 ft.

Fla., St. Petersburg.—Clubhouse.—St. Petersburg Golf Club is having plans prepared by Henry H. DuPont & Co., 306 Central National Bank Bldg., St. Petersburg, for golf clubhouse; rustic design on exterior; fumed woodwork inside; Spanish tile floors; Reynolds shingle roof; lockers and showers.

Ga., Atlanta.—Clubhouse.—Capitol City Club will remodel clubhouse on grounds Brookhaven Country Club, near Buckhead; about 75x150 ft.; composition roof; remodel low-pressure heating system, \$500; cost about \$10,000; A. Ten Eyck Brown, Archt., Atlanta; bids opened about May 15.

Ga., Atlanta.—Fair.—Southeastern Fair Assn. will soon begin construction of fair buildings at Lakewood; engaged Robt. Cridland, Philadelphia, as landscape architect to locate building, roadways, drives, walks, etc.; Ivan E. Allen, Chrmn. of Genl. Subscription Com. (Previously noted.)

La., New Orleans.—Restaurant.—Geo. Denegre, Agt., is having plans prepared by Favrot & Livaudais, New Orleans, to remodel building on St. Charles St. for restaurant; 2 stories; fireproof; composition roof; electric lighting; other details not determined. (J. P. Thompson, Chicago, lately noted to erect building.)

Mo., Kansas City.—Restaurant.—Baltimore Avenue Investment Co. has plans by J. H. Martling and H. F. Brandenburger, Kansas City, for building at 1116 Baltimore Ave., for occupancy as restaurant by Morledge Fish & Oyster Co., 808 Walnut St.; cream terra-cotta; green tile roof; banquet-room on top floor; site 25x142 ft.; cost \$40,000; completion by September 1.

N. C., Asheville.—Clubhouse.—C. C. Millard has plans by Smith & Carrier, Asheville, for building at Broadway and Walnut Sts.; 3 stories and basement; concrete foundation; concrete walls; 70x100 ft.; steam heat; electric lights; lower floor for 4 stores; 2d floor room for Asheville Club; upper floor apartments; loggia 70x10 ft.; cost \$30,000.

N. C., Kinston.—Fair.—Kinston Fair Assn. leased site for fair grounds and will soon begin erection of fair buildings.

Okla., Tulsa.—Undertaking.—C. C. Cole is reported to erect building at 5th and Boston Sts., to be occupied by Mowbray Undertaking Co.; 140x100 ft.; brick; garage; cost \$20,000 to \$30,000.

Tex., Abilene.—Exhibit.—Central West Texas Fair Assn. is reported to erect general exhibit building at fair grounds; 100x150 ft.; plans in progress.

W. Va., Huntington.—Festival.—Robt. Armstrong and Robt. Holley will erect building at 7th St. and 4th Ave. for Fall Festival; cost \$20,000; construction begins about May 1.

## RAILWAY STATIONS, SHEDS, ETC.

Ky., Cecilia.—Illinois Central R. R. Co., A. S. Baldwin, Ch. Engr., Chicago, is considering improvements, including erection of depot.

N. C., Kinston.—Corporation Commission directed Atlantic Coast Line R. R., E. B. Pleasant, Ch. Engr., Wilmington, N. C.; Norfolk Southern R. R., F. L. Nicholson, Chief Engr., Norfolk, Va., and other lines to construct union passenger station.



Okl., Ardmore.—Oklahoma, New Mexico & Pacific Ry., W. J. Stone Burner, Gen. Supt., will erect passenger station; 2 stories; brick and reinforced concrete.

Tex., Albany.—Missouri, Kansas & Texas Lines will rebuild depot; Leon F. Lannblad, Chief Engr. (Lately reported burned.)

Tex., Beaumont.—Gulf, Colorado & Santa Fe Ry. Co., F. Merritt, Ch. Engr., Galveston, will probably let contract in 30 days to remodel passenger and freight station at Crockett and Neches Sts.; 40x72 ft.; make 2 stories; lower floor for waiting-rooms, ticket offices, etc.; second floor, freight offices; brick walls, brick partitions; second floor, wood construction; composition or cement tile roof; hot-water heat to cost \$2000; electric lighting, about \$1500; brick sidewalk, about \$150; cost without mechanical equipment, \$45,000; W. J. Smith, Archt., Galveston; bids invited; also arrange tracks. (Lately noted.)

### SCHOOLS

Ala., Mount Vernon.—Mobile County School Commrs., Mobile, are reported to erect \$3000 brick school.

Ark., Almyra.—School Dist. sold \$10,000 bonds to erect building. Address School Trustees.

Ark., Bates.—School Dist. sold \$10,000 bonds to erect building. James Hawgood, Secy., Bates.

Ark., Blevins.—Special School Dist. sold \$10,000 bonds to erect building. Address School Trustees.

Ark., Doyleville.—Special School Dist. sold \$5000 bonds to erect building. Address School Trustees.

Ark., England.—School Board will erect high school; will sell \$22,000 bonds.

Ark., Hampton.—School Dist. sold \$6500 bonds to erect building. Address School Trustees.

Ark., Houston.—School Dist. sold \$10,000 bonds to erect building. Address School Trustees.

Ark., Little Rock.—School Board, R. C. Hall, Supt., will rebuild Fort Steele school building; 12 rooms; brick; stone trimmings; 2 stories; cost about \$60,000; J. P. Almand, Archt., Little Rock. (Lately noted burned.)

Ark., Little Rock.—Little Rock College acquired 40-acre tract at Pulaski Heights and will remove college; is having plans prepared by Frank M. Blaisdell, Bankers' Trust Bldg., Little Rock, for a number of buildings.

Ark., Whelen Springs.—Whelen Special School Dist. sold \$10,000 bonds to erect building. Address School Trustees.

Ark., Williford.—School Dist. sold \$12,000 bonds to erect building; Ben N. Yates, Prest. Trustees, Williford.

Fla., Bartow.—Lake Alfred Special Tax School Dist. will vote on \$4000 bonds to erect school in Florida. Address Dist. School Trustees.

Fla., Brooksville.—City sold \$10,000 bonds to enlarge school. Address The Mayor.

Fla., Chipley.—A. D. Campbell, Chrmn. of Trustees, receives bids until May 10 to erect school, including plumbing, heating and wiring adjoining brick and frame building; plans and specifications at office of Mr. Campbell at Chipley, and Warren & Goin, Archts., Gainesville, Fla. (Lately noted.)

Fla., Clearwater.—School Dist. No. 2 votes in May on \$20,000 bonds to erect school building; D. N. Hollins, Supt. (Lately noted.)

Fla., Lake Helen.—Board of Public Instruction, Geo. F. Crouch, Chrmn., De Land, Fla., receives bids until May 10 to erect school; 4500 sq. ft. ground floor space; 2 stories; 4 classrooms and auditorium; brick; asbestos slate shingles; steam heating; electric light; cost about \$10,000; plans and specifications at office of Mark & Sheftall, Archts., 210 Clark Bldg., Jacksonville.

Fla., Live Oak.—School Trustees engaged Mark & Sheftall, Jacksonville, to prepare plans for grade and high-school building; about 60x190 ft., with auditorium; 2 stories and basement; about 18 classrooms; study hall, laboratories, etc.

Fla., Milton.—School Trustees will erect school; 12 classrooms and auditorium; cost about \$25,000.

Fla., Milton.—City is having plans prepared by W. D. Willis, Pensacola, Fla., for high school; 12 classrooms and auditorium with balcony to seat 600 or more; brick; tile roof; steam heat; estimated cost \$26,000; bids opened May 4.

Okl., Park Hill.—Dept. of the Interior, Office of Indian Affairs, Cato Sells, Commr.,

Washington, D. C., receives bids until May 5 to erect frame dormitory for Cherokee School; plans and specifications at offices of following: U. S. warehouses at Chicago, St. Louis, Omaha, Neb.; Builders' Exchange, St. Paul, Minn., and office of Supt. of Cherokee Orphan Training School.

Fla., Tampa.—Hillsboro County Board of Education accepted plans (conditionally) for 2 junior high schools on Swann Ave., Hyde Park, and on Tampa Heights; not less than 18 classrooms, each to accommodate 50 pupils; auditorium and dining-room, each with minimum capacity of 800; manual training and domestic science equipment; Marshall Moore, Secy. (Lately noted.)

Fla., Tavares.—Special Tax School Dist. receives bids until May 10 to erect school building; W. H. Carr, Archt., Leesburg, Fla.; opens bids same date for \$10,000 bonds.

Ga., Atlanta.—Board of Education adopted tentative plans for 4 schools at East Atlanta, Ridge Ave., Howell Station and West End Park section; W. M. Slaton, Supt. Schools.

Ga., Decatur.—Town has plans by W. A. Edwards, 633 Candler Bldg., Atlanta, for school; 2 stories; brick; 150x80 ft.; cost \$25,000; plans ready in 3 weeks. (Noted in Mch.)

Ga., Savannah.—Board of Education will advertise for bids to erect school in East Side to be known as Waters Ave. School; will receive bids for structure with auditorium, also bids for building without auditorium; J. de Bruyn Kops, Archt., Savannah. (Lately noted.)

Ky., Mt. Olivet.—Robertson County Board of Education will erect school; special tax to be levied.

La., Bastrop.—City votes May 12 on \$55,000 bonds to erect school to replace burned structure. Address The Mayor. (Lately noted.)

La., Covington.—School Board will erect rural school Fifth Ward, St. Tammany parish; 4 rooms; frame; metal shingle roof; cost \$3500 to \$4000; Chas. Jenkins, Archt., Covington, La.; Elmer E. Lyon, Supt. Schools, Covington. (Voted \$5500 bonds, not \$55,000 as lately reported.)

Miss., Jackson.—City votes June 1 on \$65,000 school bonds; L. A. Scott, City Clerk. (Lately noted.)

Miss., Wheeler.—School Trustees will erect brick building to replace structure noted damaged by fire.

Miss., Ripley.—Town votes Apr. 20 on \$13,000 bonds to pay outstanding debt, erect school and repair others; Sam Nelms, Mayor. (Lately noted.)

Mo., Rolla.—Board of Education receives bids until May 1 to erect high school; plans and specifications at office of board and H. H. Hohenschild, Archt., Suite 310-11-12 Navarre Bldg., St. Louis, to whom applications for plans should be addressed.

Mo., St. Joseph.—St. Joseph School Dist. votes Apr. 24 on \$650,000 school bonds and \$25,000 library bonds; A. L. Loving, Dist. Secy.

Mo., Springfield.—School Board ordered election for May 4 on levy for schools.

N. C., Benson.—School Dist. No. 1 votes May 18 on \$30,000 bonds to erect school building; J. H. Rose, Secy. School Board, Benson.

N. C., Chapel Hill.—Graded School Dist. votes May 18 on \$35,000 bonds for school building. V. W. Walker interested. (Lately noted.)

N. C., Greenville.—State is having plans prepared by Hook & Rogers, Charlotte, N. C., to repair burned building for East Carolina Training School; roof replaced on basis of time and material; no contract. (Lately noted damaged \$10,000.)

N. C., Hickory.—City acquired site for school. Address The Mayor.

N. C., Maxton.—Maxton School Dist. votes June 14 on \$30,000 bonds to erect school. Address Dist. School Trustees.

N. C., Red Oak, R. D. from Rocky Mount.—Red Oak School Dist. votes May 15 on \$12,500 to erect school; J. B. Boddie, Clk. Board of Commrs., Nash County.

N. C., Wilmington.—Board of Education selected H. E. Bonitz, Wilmington, as architect for high school; cost about \$60,000; 19 classrooms, art room, 2 offices, 2 retiring-rooms, auditorium to seat 600; basement to contain classrooms for domestic science and manual training; building to be faced with cream-colored press brick, trimmed in terracotta limestone; steam heat; plans completed about May 15. Address Archt.

N. C., Winston-Salem.—Slater Normal and Industrial School is having plans revised

by W. C. Northrup, Winston-Salem, for girls' dormitory; brick; fireproof; 4 stories; cost \$15,000. (Lately noted.)

Okl., Okmulgee.—Board of Education is having plans prepared by Smith, Rea & Lovitt, 602 Finance Bldg., Kansas City, Mo., for \$100,000 high school. (Previously noted.)

Okl., Tulsa.—Henry Kendall College plans to erect science hall, using native granite, limestone, brick, marble and cement; 2 stories and basement.

S. C., Cades.—City sold \$3500 bonds and will erect school; brick. Address The Mayor.

S. C., Hemingway.—School Trustees, J. M. G. Eaddy, Chrmn., will erect 2-story school; brick; slate roof; furnace; lighting not decided; cost \$15,000. (Lately noted.)

S. C., Sumter.—Board of Education will erect high school on W. Liberty St. and make improvements to present school buildings; total expenditure \$50,000.

Tenn., Camden.—High School Building Com. receives bids until Apr. 26 to erect high school; 57.6x77 ft.; 2 stories; ordinary brick construction; composition roof; steam heat; electric lights; cost \$20,000; L. M. Weathers, Archt., Memphis. (Noted in February.)

Tenn., Carthage.—City, A. C. Read, Mayor, voted \$15,000 bonds to erect high school; about 110x56 ft.; brick; composition roof; hot-air heat; cost about \$10,000; C. K. Colley, Archt., Nashville. (Noted in Mch.)

Tenn., Gold Point (not a P. O.).—Hamilton County Board of Education, Chattanooga, has plans by Clarence P. Jones, 620 Hamilton Bank Bldg., Chattanooga, for grammar school; 92x67 ft.; ordinary construction; composition roof; hot-air heat; cost \$12,000 without mechanical equipment; contract let Apr. 27.

Tenn., Manchester.—City will issue \$8000 bonds to erect school. Address The Mayor.

Tenn., Millington.—Shelby County Board of Education, Memphis, will erect school building; fireproof; furnace; electric light; concrete sidewalks; cost \$50,000; other details not determined. Address E. Woods, Millington. (Lately noted.)

Tenn., Saddy.—See Tenn., Chattanooga.

Tex., Austwell.—School Board is having plans prepared by J. Henry Yentzen, Yockum, Tex., for school building; 93x40 ft. (Lately noted.)

Tex., Austin.—School Board will petition city for election on \$250,000 bonds for schools as follows: \$125,000 high school, ward schools in West Austin and Tenth Ward, remodeling Peace School and other ward schools; A. N. McCallum, Supt. of Board.

Tex., Belton.—Prairie View School Dist. will petition Commr. Court for authority to vote on \$5000 bonds for school. Address Dist. School Trustees.

Tex., Concho.—Concho School Dist. voted \$4500 bonds to erect building; stone; 1 story; 3 rooms; provision for additional story later. Address Dist. School Trustees.

Tex., Haslet.—Haslet School Dist. defeated \$10,000 bonds to erect school. (Lately noted.)

Tex., Littlefield.—School Dist. will erect buildings; 2 stories; brick; ordinary construction; fireproof considered; cost \$10,000; expects to let contract by June 1; architect not selected. Address Arthur P. Duggan, Littlefield. (Lately noted to vote bonds May 1.)

Tex., Jefferson.—Trustees School Dist. No. 3 will erect school; fireproof; slate or tile roof; cost \$25,000 to \$30,000; architect not selected; will let contract (in entirety) in June. (Lately noted.)

Tex., Sherwood.—O. E. Stevenson, Judge Irion County, receives bids until Apr. 23 to erect school; brick or stone; 6 classrooms and auditorium; cost not to exceed \$10,000; contractors to furnish own plans and specifications.

Tex., Temple.—City approved plans for two 4-room brick schools and 6-room brick addition. Address The Mayor.

Tex., Trent.—City voted \$3000 bonds to erect addition to high school.

Tex., Waco.—Baylor University is having plans prepared by Geo. Burnett, Waco, for athletic building; 100x48 ft.; ordinary construction; composition roof; steam heat; electric lighting; cost \$10,000; plans ready in about 10 days. (Noted in March.)

Tex., Ysleta.—Ysleta Dist. voted \$17,000 bonds to erect school. Address Dist. School Trustees.

Va., Appomattox.—Appomattox Agricultural High School, L. Crawley, Principal, will erect dormitory; 36x72 ft.; fireproof; composition roof; \$500 to \$600 heating plant;

acetylene-gas lighting; cost \$8000 to \$10,000; Heard & Caldwell, Archts., Lynchburg, Va.; bids opened Apr. 20 or later. (Lately noted.)

Va., Staunton.—City has plans by Collins Bros., Staunton, for colored school at Sunny-side, Johnson and Stafford Sts.; 6 rooms; ordinary construction; metal roof; hot-air heat; cost \$12,500. Address architects. (Lately noted.)

W. Va., Charlestown.—St. Hilda's Hall, under direction of Mrs. Duvall, will remodel structure; construct roof; stucco cement plaster exterior finish; box and cornice, spouting, hardwood floors on first floor, plaster repairs, front and rear porches, repairs to heating and plumbing systems, electric lighting system, painting, concrete fence and pavement; cost \$10,000; construction under supervision of H. P. Whitmore.

W. Va., Fairmont.—State Board of Control, Charleston, W. Va., opened bids to erect Normal School building; J. L. Crouse, Greensboro, N. C., is lowest bidder; plans call for structure 85x250 ft.; ordinary and fireproof construction; slag roof; cost about \$110,000; single fan system of indirect-direct steam heat, \$13,000; Paul A. Davis, 3d, Archt., 1713 Sansom St., Philadelphia. (Previously noted.)

### STORES

Ala., Birmingham.—Jonathan Bryan and Lee C. Bradley estates are reported to erect 3-story building on 20th St. adjoining American Trust Bldg.

Ark., Little Rock.—Mutual Real Estate Co. has plans by Mann & Stern, Little Rock, for store and lodge building at 4th and Louisiana Sts.; 140x140 ft.; 2 stories; cost about \$40,000. (Lately noted under Miscellaneous.)

Fla., Jacksonville.—Buckland & Fitcher will erect 2-story brick-vener building on Silver St.; cost \$6000.

Fla., Miami.—Christiansen Bros. will erect building on 8th St. between Aves. D and E; 2 stories; reinforced concrete; 50x90 ft.; lower floor for ice-cream factory and store-rooms; upper floor, apartments; Nolan & Sculthorpe, Archts., Miami.

Fla., Plant City.—S. E. Mays will erect building; brick; 30x60 ft.; 2 stories.

Fla., Fellsmere.—F. H. Trimble, Archt., Fellsmere, is reported remodeling Broadway Hotel for business building; will provide stucco finish, flat roof, etc.; stores on lower floor.

Fla., Stuart.—Mayor McDonald will erect building; 48x78 ft.; 2 stories; reinforced concrete; lower floor for stores with plate-glass fronts; upper floor for apartments.

Ga., Atlanta.—Mrs. Kelly Evans is reported to erect building at Peachtree and Ivy Sts.

Ga., Atlanta.—F. D. McMillan will erect business building at Ponce de Leon Pl. and Ponce de Leon Ave.; cost \$3000.

Ga., Atlanta.—Ike Berger will expend \$3500 to remodel building at 4 Peachtree St.; day labor.

Ga., Columbus.—L. S. Cohen will erect store building on 1st Ave.; 2 stories; brick; metal roof; freight elevator; cost about \$5000; Chas. F. Hickman, Archt., Exchange Bldg., Columbus.

Ga., Ellenton.—Ellenton Supply Co. will erect store building to replace burned structure.

Ga., Savannah.—Hibernia Realty Co. is reported to remodel building for stores and hotel. (See Hotels.)

Ga., Savannah.—Chatham Bank & Trust Co. is reported to convert old Chatham Artillery Hall at Bull and State Sts. into stores, offices and lodge rooms.

Ga., Tallapoosa.—J. P. Gholston, Comer, Ga., and W. J. McCurdy, Tallapoosa, contemplate erecting store building or store and hotel. (See Hotels.)

Ky., Lexington.—A. F. and A. M. has plans for Masonic Temple with 2 stories on lower floor. (See Association and Fraternal.)

Ky., Pikeville.—W. H. McCulloch will erect 2-story store and dwelling.

La., Shreveport.—Lieutenant-Governor T. C. Barrett acquired site on Texas St. 50x130 ft. and will erect business building.

Md., Baltimore.—Bowen & King have plans by Theodore Wells Pietsch, 1210 American Bldg., Baltimore, to remodel store at 405 N. Charles St.; marble front; floor level raised, wood and mosaic floors; new fixtures for retail optical business; cost about \$11,000; bidders are John Hughes, Jr., 104 E. Saratoga St.; B. F. Bennett Building Co., 123 S. Howard St.; A. D. Mattox, Belle Ave. near Garrison Ave.; H. H. Macellan, 15 E. Fayette St.; Edw. Watters, 509 Charles St.; Patrick Cushen, 217 St. Paul St.; D. M. Andrews Co., Mt. Vernon Ave. and 26th St.; John Hiltz,

7 Clay St.; Burns & Russell, American Bldg.; all of Baltimore. (Previously noted.)

Md., Baltimore.—Samuel Want, 1233 Calvert Bldg., will erect building at Eutaw and Baltimore Sts.; 74x110 ft.; 5 stories and basement; brick; roofing, heating and lighting details undecided; cost about \$85,000; Wm. O. Sparklin and Geo. S. Childs, Archts., 502 Law Bldg., Baltimore. (Noted in March to remodel building.)

N. C., Asheville.—C. C. Millard will erect store, club and apartment building. (See Miscellaneous.)

N. C., Winston-Salem.—John L. Wimbish acquired building at 4th St. and Claremont Ave. and will erect addition.

S. C., Charleston.—C. B. Huie, 189-91 E. Bay St., Charleston, is interested in proposition to build store and office building; 100x165 ft.; 10 or 12 stories; 2 lower floors for department store; upper floors for professional offices; office portion U shaped; cost, including site, \$600,000.

S. C., Greenwood.—W. M. and J. T. Outz will erect store building to replace lately burned structure.

S. C., Greenville.—Jamison & Morris are erecting building for store and office; 40x50 ft.; 2 stories and basement; cost \$9000; construction by owners.

Tenn., Knoxville.—Morris Bart opens bids in about 3 weeks to remodel store building; 2 stories and basement; 50x100 ft.; ordinary construction; gravel roof; steam heat; electric light; Albert B. Baumann, Archt., Knoxville. (Noted in March.)

Tenn., Memphis.—Edw. Abele will erect five 1-story brick stores and fireproof garage at Madison Ave. and Cleveland St.; cost \$12,000.

Tenn., Memphis.—Knights of Pythias Building Assn. will erect building for store, etc. (See Association and Fraternal.)

Tenn., Memphis.—Pritchard Bros., 167-71 Union Ave., will erect building on Madison Ave. for N. O. Nelson Co.; 3 stories and basement; reinforced concrete; cost \$40,000; also erect 1-story-and-basement building adjoining, of reinforced concrete construction, for their own use; bids opened; G. M. Shaw, Archt., Memphis.

Tex., Beaumont.—Jefferson Lodge No. 55, K. of P., will erect building for stores, etc. (See Association and Fraternal.)

Tex., Fort Worth.—J. C. Ingram is having plans prepared for store and hotel building. (See Hotels.)

Va., Galax.—W. F. Murphy will let contract to Mr. Smoot, Galax, to rebuild store recently reported damaged by fire; 30x90 ft.; fireproof; metal roof; heating undecided; electric light; cement sidewalks; probably elevator; cost about \$3000; construction to begin about June 1.

Va., Lexington.—Robinson Supply Co. will erect building.

Va., Norton.—Norton Hardware Co. has plans by Burnett & Loggans, Bristol, Va., for store; 84x129 ft.; 3 stories; mill construction; electric elevator; construction to begin about Apr. 15. (Lately noted.)

Va., Norfolk.—M. Samet will expend \$20,000 for improvements and addition to New York Sample Store at 452 Main St.; metal ceilings; new fixtures; steam-heating plant; will provide 2000 sq. ft. additional floor space.

## THEATERS

Ala., Ozark.—T. W. Chafin will erect moving-picture theater to be leased to Gala Amusement Corp., Troy, Ala.; 30x110 ft.

Ala., Troy.—Will Flowers, R. E. Steiner, Jr., and Mr. Couch, all of Montgomery, Ala., leased Royal Theater and will improve.

Md., Baltimore.—Mount Royal Amusement Co. has plans prepared by Wm. O. Sparklin and Geo. S. Childs, 507 Law Bldg., Baltimore, for alterations and addition to building at 617-19 North Ave. for motion-picture theater; auditorium 40x100 ft.; lobby 22x50 ft.; brick and metal; slag roof; steam heat; electric light, gas emergency; bidders are Consolidated Engineering Co., 243 Calvert Bldg.; Singer-Pentz Co., 600 Equitable Bldg.; Thos. B. Stanfield, 212 Clay St.; John Hiltz & Son, 7 Clay St.; Blake & Engle, Law Bldg.; H. H. Macellan, 15 E. Fayette St.; Cowan Building Co., 106 W. Madison St.; Kogswell-Koether Co., 406 Park Ave.; all of Baltimore; bids opened Apr. 19; lighting, plumbing, heating and interior decorating reserved. (Noted in Mch. under name A. B. Price.)

## WAREHOUSES

Ala., Alabama City.—David Erwin will erect warehouse.

Ala., Birmingham.—John V. Coe will erect warehouse at Avenue E and 20th St.; 1 story; brick; concrete foundation; cost \$6000 to \$7000.

Ga., Atlanta.—Exposition Cotton Mills has plans by Walker & Chase, Candler Bldg., Atlanta, for cloth warehouse; tar and gravel roof; automatic fire doors; 3 stories; 90x82 ft.; cost \$15,000; contract let Apr. 20.

Ky., Mt. Sterling.—Kirkpatrick & Clay plan to improve warehouse; will erect sales floor on even plane with warehouse, connect 2 structures with steel driveway across Sycamore St., providing capacity of 225,000 bales.

La., New Orleans.—Port Comms., New Orleans Court Bldg., receive bids until April 28 for fire doors and steel rolling doors, etc.,

for cotton warehouses and terminals (under construction) heretofore detailed in connection with \$3,000,000 bond issue; plans and specifications for doors, etc., at office of Ford, Bacon & Davis, Engrs., 321 Canal St., New Orleans; contractor to furnish bond for one-fourth amount of contract price, but not less than \$30,000. (See Machinery Wanted.)

N. C., Durham.—Farmers' Warehouse (J. E. Bowling, E. H. Lawrence and E. H. Brady) will erect warehouse; 306x132 ft.; stoves; electric lighting; hand elevator; cost \$2800; to be erected by Mr. Bowling under supervision of Mr. Lawrence.

N. C., Newbern.—J. S. Miller and others are considering erection of tobacco warehouse.

## BUILDING CONTRACTS AWARDED

### APARTMENT-HOUSES

Fla., Jacksonville.—Julian Prewitt let contract to H. F. McAden, 1555 Hubbard St., Jacksonville, to erect apartment-house at Hershell and Margarette Sts.; 83x49 ft.; brick; gravel roof; heating by American Radiator Co.; \$800; lighting, \$400; R. A. Benjamin, Archt., Bisbee Bldg., Jacksonville. (Lately noted.)

Fla., St. Petersburg.—R. G. Grigg and others let contract to construct foundation of hotel-apartment house. (See Hotels.)

Ga., Atlanta.—North Park Investment Co. let contract at \$50,000 to Mackle Construction Co., 809 Grant Bldg., Atlanta, to erect apartment-house at Piedmont Ave. and 14th St.; 3 stories; 100x134 ft.; 15 apartments; concrete foundation; brick walls; stud partitions; face brick exterior finish; tar and gravel roof; steam heat; electric light; Haralson Bleckley, Archt., Atlanta. (Noted in Mch.)

Ga., Atlanta.—W. F. Crusselle let contract at \$877 to T. C. and Paul Wesley, Atlanta, to erect 2-family apartment-house; 47x77 ft.; frame; ordinary construction; shingle roof; hot-water heat; cement sidewalks; Horace B. Hammond, Archt., 1429 Candler Bldg., Atlanta. (Noted in Mch.)

Md., Baltimore.—Burford Apartment Co. let contract to Edw. Brady & Son, 1113 Cathedral St., Baltimore, to erect apartment-house at Charles and 33d Sts.; 4 stories; 60x130 ft.; brick; fireproof; slate roof; steam heat; gas and electric light; reported cost about \$100,000; plans prepared by Parker, Thomas & Rice, 1109 Union Trust Bldg., Baltimore. (Lately noted.)

Okla., Oklahoma City.—Helerding Bros. let contract to erect store and apartment building. (See Stores.)

Tenn., Memphis.—C. L. Clancy let contract to R. C. Clinton, Memphis, to erect brick tenement-house at 15 W. Carolina Ave.; cost \$4000.

Tex., Austin.—Edwin C. Kreisler, 820 Scarbrough Bldg., Austin, completed plans for duplex apartment building; cost about \$4000; contract let.

Tex., El Paso.—W. H. Austin let contract to Jolly & Morris, 517 Caples Bldg., El Paso, to erect apartment-house; mill construction; composition roof; 3 stories; cost \$35,000; heating, \$3000; Gibson & Robertson, Archts., Herald Bldg., El Paso. (Lately noted.)

### ASSOCIATION AND FRATERNAL

Tex., Dallas.—Negro Knights of Pythias of Texas let contract to Walton Construction Co., Dallas, to erect building at 2601-2603 Elm St.; 4 stories; completion in 90 days; cost \$73,600; W. Sydney Pittman, Archt.

### BANK AND OFFICE

Mo., Kansas City.—Chambers estate let contract to Geo. L. Brown & Son, Kansas City, to erect office building at 12th and Walnut Sts.; 50x120 ft.; fireproof; gravel roof; steam heat; electric lighting; prismatic sidewalk lights; cost \$140,000; amount of subcontracts, \$120,000. Address Contrs. (Lately noted.)

N. C., Lincolnton.—First National Bank let contract to McAlister & Kistler, Lincolnton, to erect bank building; 24x90 ft.; ordinary construction; composition roof; steam heat; electric lights; cost \$10,000; also let contract to Gastonia (N. C.) Plumbing & Heating Co. for heating, and Walker-Tompkins Co., Charlotte, for plumbing; Louis H. Ashby, Archt., Charlotte, N. C.

S. C., Taylors.—Citizens' Bank of Taylors let contract to Jamison & Morris, Greenville, to erect building; 20x43 ft.; cost, without equipment, \$2000; F. H. & J. G. Cunningham,

ham, Archts., Greenville, S. C. (Lately noted.)

Tenn., Chattanooga.—Loomis & Hart Furniture Co. let contract to D. F. Brandon, Chattanooga, to erect office building on Water St.; 2 stories; brick; 30x62 ft.; fireproof vaults; automatic sprinklers and private telephone system; cost \$7000; Clarence T. Jones, designing and supervising architect.

Tex., Austin.—Geo. W. Littlefield let contract at \$96,072 to Reinhart & Donovan, Oklahoma City, to erect 9-story addition to building; 24x60 ft.; 1 complete story over main building; fireproof; Barrett specification roof; Otis high-speed elevator; let contract at \$8075 to John L. Martin, Austin, for plumbing and heating fixtures, including special Turkish bath equipment for barber shop; also let contract at \$1448 to Wright Bros., Austin, for wiring; C. H. Page & Bro., Archts., Austin. (Lately noted.)

Tex., Dallas.—J. Ashford Hughes let contract to remodel Flatbush Bldg., Main and Ervay Sts.; provide main entrance on Ervay St., etc.

Tex., Fort Worth.—Fort Worth Club closed contract with Bryce Building Co., Fort Worth, to finance and erect clubhouse and office building. (See Miscellaneous.)

### CHURCHES

Ala., Lanett.—M. E. Church South, Rev. Q. A. Bonner, pastor, let contract to Edwards & Randall, Lanett, to erect building; 2 stories; 70 ft. square; brick; asphalt shingle roof; cost \$8000; Chas. W. Carlton, Archt., Lagrange, Ga.; construction begun. (Lately noted.)

Ga., Monroe.—Monroe Baptist Church let contract to R. W. and E. W. Smith, Atlanta and Cartersville, Ga., to erect building; cost \$25,000 to \$30,000; W. A. Edwards, Archt., Atlanta, Ga.

Ky., Louisville.—Parkland Christian Church let contract to T. D. Graves, 3125 Virginia Ave., Louisville, to remodel building; ordinary construction; asphalt shingle roof; granatoid sidewalks; cost \$5000; furnaces, \$400; lighting \$100; all work in general contract.

Ky., Paducah.—Broadway M. E. Church let contract to B. T. Davis, Paducah, to remodel Sunday-school rooms; cost \$2500; D. Harry Jamison, Archt., Paducah. (Lately noted.)

Md., Baltimore.—Trinity Protestant Episcopal Church let contract to Cowan Building Co., 106 W. Madison St., Baltimore, to erect parish-house at Ten Hills; 42x90 ft.; brick and frame; slate roof; steam heat; electric light; cost \$11,000; Clyde N. Fris, Archt., 1523 Munsey Bldg., Baltimore. (Noted in Feb. under Churches.)

### CITY AND COUNTY

Ky., Whitesburg.—Armory.—Franklin & Sons, Sergeant, Ky., let contract to R. B. Franklin, Sergeant, to erect armory; 50x90 ft.; mill construction; slate roof; cost \$6000; plans by owners. Address Contr. (Noted in March.)

Okla., Elk City.—Library.—Directors, W. C. Thomas, Secy., let contract to J. D. Parke, Ardmore, Okla., to erect Carnegie library; 36x56 ft.; 1 story; fireproof; green tile roof; electric lighting; cost \$8500; steam heat \$800; Crowell & Van Meter, Archts., Wichita, Kans. (Lately noted.)

### COURTHOUSES

Ky., Benton.—Marshall County Comms. let contract to Spradlin & Hill, Fulton, Ky., to erect courthouse; 2 stories; brick; cost \$20,000.

Tenn., Shelbyville.—Bedford County

Comms. let contract to construct 3 vaults on first floor and 1 on second floor courthouse; completion by June 15.

### DWELLINGS

Ark., Pine Bluff.—M. Schnable let contract to Edgar Hogan to erect residence at 6th and Beech Sts.; brick; semi-colonial bungalow style; cost \$8000; Fred Kreszig, Archt.

Ark., Newport.—B. F. Mitchell, Tuckerman, Ark., let contract to A. R. Anderson to erect residence.

Ark., Newport.—Lockwood Burkett let contract to W. H. Snetser, Newport, to erect 5-room cottage.

D. C., Washington.—Lacy & Belt let contract to H. C. Belt, 439 G St. S. W., Washington, to erect 3 dwellings at 423-7 Irving St.; 2 stories; 16.8x31.11 ft.; brick; tin roof; hot-water heat; electric light; cost \$6000; W. E. Houser, Archt.

D. C., Washington.—H. B. Callahan let contract to W. Walter Vaughn, 507 Barrister Bldg., Washington, to erect dwelling at 1905 Jackson St. N. E.; 2 stories; frame; hot-water heat; electric light; cost \$3000; Merrill T. Vaughn, Archt., 2923 25th St., Washington.

Fla., Clearwater.—Jas. B. McChesney let contract to W. H. Eichelberger, Clearwater, to erect residence at Harbor Oaks; 30x45 ft.; 2 stories; stucco and brick veneer; built-up felt roof; hot-water or vapor heat; cost \$4500 without mechanical equipment; Lester Avery, Archt., Clearwater. (Lately noted.)

Fla., Tampa.—W. A. Ross let contract to Logan Bros., Tampa, to erect two one-story frame residences on S. Willow Ave. near Morrison Ave.; cost \$6800.

Fla., West Tampa.—West Tampa Improvement Co. let contract to Logan Bros., Tampa, to erect 3 residences; cost \$9000.

Fla., West Tampa.—Howard MacFarlane let contract to Logan Bros., Tampa, to erect \$4000 residence on Lime St.

Fla., Winter Park.—Owner (name withheld), care J. Percival Hutton, Archt., Orlando, Fla., let contract to F. A. Peppercorn, Orlando, to erect dwelling on Interlachen Ave.; ordinary construction; red slate roof; \$450 steam-heating equipment; cost \$9000 to \$10,000 without mechanical equipment.

Ga., Atlanta.—Mrs. Helen J. Williamson let contract to I. B. Eason & Son, Atlanta, to erect 2-story frame residence at 90 Park Lane; cost \$3500.

Ga., Savannah.—Hoyt Ware let contract to Standard Investment Co., Savannah, to erect residence on 31st St.

Ga., Savannah.—C. C. Christie let contract to Standard Investment Co., Savannah, to erect residence.

La., New Orleans.—A. J. Nelson, L. L. & G. Bldg., New Orleans, completed plans and let contract to erect residence.

Md., Baltimore.—Patrick Keely let contract to Arthur W. Burdette, 1764 Blingluff Ave., Baltimore, to erect 3 dwellings on Starr Lane near 35th St.; 2 stories, 14x46 ft.; brick; galvanized-iron roof; hot-air heat; cost \$2500; Chas. R. Burdette, Archt., 226 N. Fulton Ave., Baltimore.

Md., Howardville.—Edw. A. Albaugh has plans by and let contract to Henry A. Knott, 1430 N. Eden St., Baltimore, to erect dwelling at Villa Nova Park; 2½ stories, 34x24 ft.; frame, shingle; slate roof; hot-water heat; electric light; cost \$3600.

Md., Ruxton.—C. P. McKendrick, Paradise Ave., Catonsville, Md., let contract to Chas. W. Brown Construction Co., Narcissus Ave. near Rogers St., Baltimore, to erect dwelling.

N. C., Greensboro.—M. W. Gant, Clerk of Superior Court, let contract to W. C. Bala, Greensboro, to erect residence on Wainman St.; shingle roof; \$700 hot-water heating; cost \$7000; Harry Barton, Archt., Greensboro.

N. C., Marion.—A. Blanton let contract to Merchant & Boyles, Asheville, N. C., to erect residence; cost \$10,000; plumbing and heating not included.

S. C., Florence.—R. Cronner let contract to W. Stanton, Florence, to erect 2-story residence at Gaillard and Evans Sts.

N. C., Winston-Salem.—John Allen will erect 8-room residence on S. Main St.; cost \$3000; King & Haney, Contr., Winston-Salem.

N. C., Winston-Salem.—J. C. Goodman let contract to P. L. Miller, Winston-Salem, to erect double dwelling on W. 5th St.; cost \$6000.

N. C., Winston-Salem.—J. G. and S. W. Morrisett let contract to J. H. Grubbs, Winston-Salem, to erect dwelling on W. 4th St.; cost \$2800.



Okl., Oklahoma City.—A. F. Stewart let contract to Stewart & Wilderson, Oklahoma City, to erect residence at 3297 Classen Blvd.; cost \$4000.

Okl., Oklahoma City.—S. A. Layton let contract to R. M. Crissman to erect residence at 1411 N. Klein St.; cost \$3000.

Tenn., Memphis.—C. J. Gay let contract to erect store and dwelling. (See Stores.)

Tenn., Memphis.—Clara Lane let contract to A. F. Crispin, Memphis, to erect brick-vener residence at 1894 Oliver Ave.; cost \$3000.

Tenn., Memphis.—Mike Picoco will erect 2-story stone dwelling at 578 St. Paul St.; hardwood floors; furnace heat; cost \$5000; A. B. Lanning, Contr., Memphis.

Tex., Abilene.—R. C. Lewis let contract to erect brick bungalow.

Tex., Childress.—F. B. Bryan let contract to Oliver Latson to erect dwelling; 5 rooms; shingle roof; cost without mechanical equipment, \$2500. Address Contr. (See Machinery Wanted.)

Tex., Dallas.—Woerner & Cole, 509 Sumpter Bldg., Dallas, prepared plans and let contracts to erect 3 dwellings and erecting addition to and remodeling business building.

Tex., El Paso.—Robt. Krakner let contract to Jolly & Morris, 517 Caple Bldg., El Paso, to erect dwelling on Arizona St.; 10 rooms; shingle roof; \$1000 heating plant; cost \$14,000; Trost & Trost, Archts., Mills Bldg., El Paso. (Lately noted.)

Tex., Fort Worth.—Mrs. C. K. Bell let contract to J. R. Johnson, Fort Worth, to erect 2-story brick residence at 2544 Fifth Ave.; cost \$5000.

Tex., Fort Worth.—M. J. Bliscoe let contract to McKelthen & Gupthill, Fort Worth, to erect residence; 1 story; brick veneer; cost \$3000.

Tex., Galveston.—Warren W. Peters let contract to R. M. Hermann, Galveston, to erect dwelling at 3129 Ave. R; 3 1/2 x 7 1/2 ft.; bungalow style; 6 rooms and bath; mill construction; galvanized-iron roof; electric light; cost \$3000. (Lately noted.)

Va., Roanoke.—J. M. McNells let contract to J. R. Carter, Roanoke, to erect dwelling; 3 1/2 x 4 1/2 ft.; ordinary construction; slate roof; hot-water heat; electric and gas lighting; granolithic sidewalks; press-brick casing; clear oak floors; dining-room finished in quartered oak; library, parlor and hall in mahogany; provision for electric heating in moderately cool weather; cost \$14,000; J. R. Ragan, Archt., Roanoke.

Tex., Victoria.—Frank H. Crain let contract to erect \$7500 residence.

Tex., Victoria.—Guy Mitchell let contract to erect \$6000 residence.

Va., Fredericksburg.—R. P. Rixey has plans by and let contract to E. G. Heflin, Fredericksburg, to erect dwelling; 25 x 35 ft.; ordinary construction; galvanized-iron shingle roof; \$450 heating; electric light; cost \$3500. (Lately noted.)

Va., Norfolk.—Mrs. Carrie Phillips let contract to F. C. Lowe, Norfolk, to erect frame cottage; 9 rooms and bath; cost \$3000.

Va., Oak Ridge.—C. H. Yates let contract to E. H. Parrish Co., Charlottesville, Va., to erect residence.

W. Va., Bluefield.—E. J. McQuail, Ennis, W. Va., let contract to A. G. Kiser, Tazewell, Va., to erect residence on Boyer St.; cost \$20,000.

W. Va., Wheeling.—Mrs. Lee Hull is reported to have let contract to John M. Murphy Co., Wheeling, to erect \$3600 10-room residence.

### GOVERNMENT AND STATE

Va., Lawrenceville.—Postoffice.—Meredith Land Co. let contract to W. W. Meredith, Lawrenceville, to erect building on Hicks St.; 2 stories; brick; tin roof; electric light fixtures to cost about \$1500; 30 x 50 ft.; lower floor for postoffice; upper floor probably for offices; cost \$5000; Burwell Ridick, Archt., Suffolk, Va. Address Contr.

### HOSPITALS, SANITARIUMS, ETC.

Ark., Hot Springs.—Constructing Quartermaster is reported to have let contract to Kelley & Beahl, Leavenworth, Kans., to erect diet kitchen, storehouse and barracks at Army and Navy Hospital; cost \$32,000; War Department also reported contemplating expending \$100,000, including \$10,000 for operating-room. (Lately noted.)

Ky., Harrodsburg.—A. D. Price Memorial Hospital let contract to Cal S. Thomas & Co., Louisville, to erect building.

N. C., Charlotte.—Mercy General Hospital let contract to Rose & Beaman, Goldsboro, N. C., to erect hospital at E. 5th St. and Monroe Rd.; brick and concrete; 140 x 40 ft.; 3 stories; fireproof; slate or Carey roofing; steam heat; electric lighting; cost \$40,000 without mechanical equipment; Hunter & Gordon, Archts., Charlotte. (Noted in Oct.)

N. C., Greensboro.—Drs. W. P. and C. R. Reaves let contract to John T. Hunt, Greensboro, to erect office and infirmary building; 3 stories and finished basement; 45 x 95 ft.; English style; gravel roof; steam heat, separate contract let about Apr. 20; push-button elevator; cost \$31,000, exclusive of equipment; completion by October 1; Harry Barton, Archt., Greensboro. (Lately noted.)

Tex., Dallas.—Dr. C. W. Barrier let contract to erect dormitory near Southwestern Methodist University; 3 stories; semi-fireproof; 44 rooms; Woerner & Cole, Archts., 509 Sumpter Bldg., Dallas.

### HOTELS

Fla., St. Petersburg.—R. G. Grigg and others let contract to H. W. Bryan, St. Petersburg, for foundation for hotel-apartment-house; 4 stories; L shape; 70 x 140-ft. roof garden; elevators; telephone system; mill construction; Spanish tile roof; cost about \$25,000; Fardon & Feltham, Archts., St. Petersburg. (Lately noted.)

Ga., Atlanta.—John W. Grant will remodel building on Broad St. adjoining Child's Hotel, for hotel addition; will provide 30 additional rooms, of which 25 will have private baths; also remodel present structure; cost about \$30,000; let contract to W. H. George, Atlanta; S. D. Trowbridge, Archt., Atlanta.

Tex., Matador.—R. P. Moon has contract to erect hotel and stores. (See Stores.)

### MISCELLANEOUS

N. C., Hendersonville.—Clubhouse.—Geo. N. Sarven, St. Petersburg, Fla., has contract to erect clubhouse at Mountain Home; 3 stories; 16 bedrooms on third floor; ballroom on second.

Tex., Fort Worth.—Clubhouse.—Fort Worth Club closed contract with Bryce Building Co., Fort Worth, to finance and erect building at 6th and Main Sts. for clubrooms and offices; 6 stories. (Previously noted to erect 10-story structure, but these plans abandoned.)

W. Va., Charles Town.—Marshall Burns let contract to W. Henry, Summit Point, W. Va., to erect barn; 50 x 100 ft.; mill construction; tin roof; electric lighting; cost \$8000; construction begun Apr. 1. (Previously noted.)

### SCHOOLS

Ala., Auburn.—Polytechnic Institute let contract to Thos. Purvis, 110 W. Water Ave., Selma, Ala., to erect gymnasium; 113 x 65 ft.; ordinary construction; steel truss, glazed tile, tin deck roof; electric light; cost \$40,000; Lockwood & Sons, Archts. (Lately noted.)

Fla., Frostproof.—Polk County Board Public Instruction let contract to Howard & Wread, Bartow, Fla., to erect school building; 12 classrooms, domestic science, manual training, libraries, auditorium; toilets in basement; mill construction; asbestos slate roof; electric wiring; fire escapes included in contract; cost \$11,640; Wm. L. Redditt, 201 Williford Bldg., Arcadia, Fla., and Chas. P. Niederhauser, Archts. (Lately noted.)

Ga., Conyers.—City, Chas. K. Gailey, Mayor, let contract to Little & Phillips, Cordele, Ga., to erect school building; mechanical blast heating (separate bids); cost about \$30,000; W. A. Edwards, Archt., Candler Bldg., Atlanta. (Lately noted.)

Mo., Luray.—Roberts & Turney, Lewistown, Mo., have contract to erect school building; 35 x 63 ft.; 2 stories and basement; terra-cotta trimmings; yellow pine finish and floor; vapor heat; cost about \$8000; Ludwig Abt, Archt., Moberly, Mo. (Noted in March.)

N. C., Raleigh.—Raleigh Township Graded Schools, Frank M. Harper, Supt., will erect school in Glenwood Section; 10 rooms, 24 x 32 ft. each; fireproof, brick; cost \$30,000; Frank Simpson, Archt., Raleigh, will build immediately 3 rooms, to be added to at later date. (Lately noted voting bonds for schools.)

N. C., Statesville.—School Board let contract to J. D. Grandy, Charlotte, N. C., to erect school building; 70 x 90 ft.; 3 stories; ordinary construction; metal roof; electric lighting; heating not in contract; will sublet roofing, wiring, plumbing and stone work; cost \$20,000; Wheeler & Stern, Archts., Charlotte. Address contractor. (Lately noted.)

Okl., Tulsa.—Board of Education let con-

tract at \$63,582.97 to E. S. Hutchinson & Co., Tulsa, to erect schools as follows: Cherokee Heights, 2 units; Chas. A. McDonald, Archt., 510 Robinson Bldg., Tulsa; Capital Hill, 2 units; A. H. Mott, Archt., Room 4, Boston Bldg., Tulsa; Horace Mann School, 1 unit, manual training, domestic science and art building and kindergarten building; M. C. Cross, Archt., Room 30, Nebraska Bldg., Tulsa; Osage School, 1 unit, with basement for domestic science and manual training; Geo. Winkler, Archt., 415 Palace Bldg., Tulsa; H. O. McClure, Prest. of Board; also approved plans by J. P. Curtin, Tulsa, for repairs to Sequoyah School. (Lately noted.)

S. C., Ellmore.—School Trustees let contract to W. B. Summersett, Columbia, S. C., to erect school building; 46 x 125 ft.; 2 stories; ordinary construction; slate roof; steam heat; cost \$12,000; let contract to De Lay Roofing & Cornice Co., Columbia, for roofing, and to W. B. Gumarin & Co., Columbia, for heating; Urquhart & Johnson, Archts., Columbia. (Lately noted.)

S. C., Ridgeland.—School Board let contract to C. V. York, Raleigh, N. C., to erect school building; about 75 x 77 ft.; metal shingle roof; hot-air heat; Arthur W. Hamby, Archt., Palmetto Bldg., Columbia, S. C. Address Contr. (Lately noted.)

Tenn., Chattanooga.—Hamilton County Board of Education, W. S. Beck Chrmn., let contracts as follows to erect and install plumbing, lighting and heating for following brick schools: Red Bank, S. J. McKunkin, at \$7121; 92 x 67 ft.; ordinary construction; composition roof; hot-air heat; C. P. Jones, 620 Hamilton National Bank Bldg., Chattanooga, Archt.; Mowbray, on Walden's Ridge, at \$6980 for general work to R. I. Ward and at \$289 for heating to Chattanooga Blow Pipe & Roofing Co.; W. H. Sears, Archt., James Bldg., Chattanooga; addition to St. Elmo School, St. Elmo, Tenn., at \$13,438, to Chambers & Son, Chattanooga; J. D. Aisup, Archt., James Bldg., Chattanooga; Rossville, at \$7380, to P. O. Rogers & Son, Chattanooga; electric lights, H. L. Huntington, Archt., Chattanooga; also opened bids for plumbing and heating for St. Elmo School addition; Walter T. Wood, at \$1435, is lowest bidder for former, and Knodler & Meredith, at \$1318, for latter; also transferred contract to W. A. Varner & Son, Chattanooga, to erect Soddy negro school at \$765. (Lately noted.)

Tenn., Morristown.—School Trustees let following contracts in connection with erection of proposed school: Superintending construction and furnishing concrete blocks, J. B. Willis, Morristown; door frames, window sash and doors, East Tennessee Woodworking Co.; long joists, sheathing and laths, C. B. Haag Lumber Co.

Tex., Bellville.—School Trustees let contract to erect 3-story addition to school; Giescke & Geeren, Archts., Littlefield Bldg., Austin, Tex.

Tex., Dallas.—Board of Education let contract to Watson Co., Dallas, to erect six-room addition to Roberts School; fireproof; steam heat; electric light; cost \$28,000; Hubbell & Greene, Archts., Dallas. (Lately noted.)

Tex., Fairfield.—School Trustees let contract to erect school; cost about \$12,000; C. H. Leimbach, Archt., 1105 Southwestern Life Bldg., Dallas, Tex.

Tex., Santa Anna.—School Trustees let contract to erect 5-room frame school building; cost \$5000; J. P. Caldwell, Archt., San Marcos, Tex.

Tex., San Antonio.—School Board let contract to Walsh & Burney, Conroy Bldg., San Antonio, to erect school on Hunstock Ave.; 48.8 x 81.6 ft.; ordinary construction; Ludovick tile roof; jacketed stoves; cost \$10,000; Leo M. J. Dielmann, Archt., 300 E. Commerce St., San Antonio. (Lately noted.)

### STORES

Ala., Headland.—C. E. and Karl D. Simmons, R. D. No. 3, Headland, are reported to have contract to erect \$18,000 building.

Ala., Selma.—Miss Emma Elliasburg let contract to G. C. Wright, Prattville, Ala., to erect store building; 55 x 79 ft.; 2 stories; ordinary construction; tin roof; heaters; knob and tube lighting; cost \$6500; John McKiel, Archt., Selma. (Lately noted.)

Ga., Atlanta.—Ware & Harper let contract to C. J. Norris, Atlanta, to repair burned structure at 261 Forrest Ave.; cost \$4000.

Md., Baltimore.—Chas. Wilms, Roland Park, Md., let contract to J. J. Walsh & Son, 1533 Maryland Ave., Baltimore, to enlarge building at 106 W. Lexington St. for store; brick and steel; new electrical fixtures; cost about \$800; Otto Kubitz, Archt.,

Hoffman Bldg., Baltimore; bids opened Apr. 10. (Lately noted.)

Md., Frederick.—Thos. A. Chapline and Chas. Byerly, Agts., let contract to Hahn & Betson, Frederick, to erect building to replace structure noted collapsed; Kepner & Smith, Archts., Frederick.

Miss., Clarksdale.—H. H. Hopson is reported to have let contract to Sunflower Lumber Co., Clarksdale, to erect store building.

Okl., Enid.—Gannon & Rogers let contract to Shaw & Frankenfeld, Enid, to erect building on Grand Ave.

Okl., Oklahoma City.—Heiderling Bros. let contract to B. W. Doney & Hudson Bros. to erect store and apartment building; triangular, 73 x 100 ft.; first story and basement fireproof; second story ordinary construction; pitch and gravel roof; cost \$10,000; J. O. Parr, Archt., Oklahoma City.

Tenn., Knoxville.—T. E. Burns Co. let contract to L. A. Galyon & Son, Knoxville, to remodel store at Wall St. and Market Pl.; excavation for basement; underpin walls with hard brick and concrete; cost \$4200; electric and gas light; steam heat to cost probably \$3000; prism sidewalk light; A. B. Baumann, Archt., Knoxville. (Lately noted.)

Tenn., Memphis.—E. C. Green let contract to A. B. Lanning, Memphis, to erect brick stores at 614-20 S. Main St.; cost \$10,000.

Tenn., Memphis.—C. J. Gay let contract to D. L. Crouch, Memphis, to erect brick store and dwelling at Beale Ave. and Turley St.; cost \$4500.

Tenn., Memphis.—Jas. S. Lanier let contract to J. W. Roane, Memphis, to erect building; 75 x 100 ft.; fireproof; polychrome terra-cotta and brick; winter garden on roof enclosed in glass with open pergola about 16 ft. wide; lower floor for stores; theater in portion of building with seating capacity of 500; Mahan & Broadwell, Archts., Memphis.

Tex., Dallas.—Woerner & Cole, 509 Sumpter Bldg., Dallas, prepared plans and let contract to remodel and erect addition to business building. (See Dwellings.)

Tex., Denton.—W. B. McClurkan let contract to M. B. Whitlock & Co., Denton, to erect 2-story store and office building; 80 x 120 ft.; mezzanine floor in rear 48 x 90 ft.; skylights; cost \$25,000 to \$35,000; Geo. Burnett, Archt., Waco, Tex. (Previously noted.)

Tex., Fort Worth.—E. A. Jackson let contract to Drake-Brannum Construction Co., Fort Worth, for metal repairs to store at 10th and Main Sts.; cost \$3000.

Tex., Kirkland.—N. W. Galbraith let contract to W. H. McAbel, Wichita Falls, Tex., to erect store building; 25 x 30 ft.; fireproof; tar and gravel roof; cost \$3000. (Lately noted.)

Tex., Matador.—R. P. Moon has contract to erect store and hotel; store building 100 x 100 ft.; hotel 40 x 60 ft.; both ordinary construction; tar and gravel roof; electric light; cement sidewalk; cost \$10,000.

Va., Lynchburg.—S. S. Kresge Co., Detroit, Mich., let contract to A. W. Lang Co., Lynchburg, to remodel and improve building at 1008-10 Main St.; will rebuild front and rear walls, make structure 2 instead of 3 stories.

### THEATERS

Tenn., Memphis.—Jas. S. Lanier let contract to erect building for store and theater building. (See Stores.)

### WAREHOUSES

Md., Baltimore.—I. J. Schlesinger, 2011 Madison Ave., let contract to Consolidated Engineering Co., 243 Calvert Bldg., Baltimore, to erect warehouse at 511 S. Sharp St.; 3 stories and basement; 18 x 66 ft.; brick; composition roof; electric lights; freight elevator; cost about \$3000; plans by J. C. Spedden, 1640 Hanover St., Baltimore. (Noted in March.)

Ga., Atlanta.—Atlanta Terminal Co. let contract to H. J. Carr & Co., Atlanta, to erect addition on Mitchell St.; cost \$9000.

Tex., Vernon.—Kell Milling Co. let contract to erect 5000-bbl. flour warehouse, etc. (See Flour, Feed and Meal Mills.)

### Specializes in Auditing.

Ridley & James Audit Co., 1124 Atlanta National Bank Bldg., Atlanta, Ga., has received auditing contract for Lee and Chester counties, South Carolina, and the counties of Troup and Wilkes in Georgia. This firm makes a specialty of audits for cities, counties and oil mills.

## RAILROAD CONSTRUCTION

## RAILWAYS

Ala., Broughton.—American Bridge Co., says a local report, is preparing to begin construction of bridge across the Alabama River for the Gulf, Florida & Alabama R. R. extension from Broughton to Pine Hill. Grading will be resumed immediately. G. A. Berry, Pensacola, Fla., is Ch. Engr. for the railroad.

Ala., Gateswood.—Perdido Lumber Co., Millview, Fla., denies press report that it is building an extension of its railroad to the Gulf of Mexico. Any extensions made would not be within 20 mi. of the Gulf, and line is for only logging purposes.

Ala., Loxley.—Financing is arranged, according to a press report, to complete the Pensacola, Mobile & New Orleans R. R. from Loxley to Mobile Bay, at the mouth of Dooley Creek. H. McLaughlin, Pensacola, Fla., is Pres.

Fla., Jacksonville.—Bids have been received by the Port Commission for grading, tracklaying and surfacing approximately 6 mi. of lines for connecting railroad and freight yards of municipal terminals. F. W. Bruce, 314 Realty Bldg., is Ch. Engr.

Fla., Kenansville.—C. H. Armstrong, Ch. Engr. South Florida & Gulf R. R., is reported thus: Track is laid for 10 mi. out of Kenansville, and tracklaying will be resumed about Apr. 20. Construction of bridges has proceeded for some time.

Fla., Pensacola.—City Commrs. will build the proposed municipal dock and belt-line railroad, receiving bids until 2 P. M. May 17 for the \$400,000 bond issue. A. Greenhut is Mayor and C. W. Eggart City Clerk.

Fla., Sebring.—Atlantic Coast Line R. R. has made survey and is expected to begin construction soon on extension of Haines City branch from Sebring toward Lake Okechobee. E. B. Pleasants is Ch. Engr. at Wilmington, N. C.

Ga., Brooklet.—Shearwood Ry. Co. will build with own forces extension from Brooklet to a junction with the Midland Rd., 4½ mi. J. S. Baxter, Garnett, S. C., is Ch. Engr. J. N. Shearouse, Brooklet, is Pres. and Treas.; John A. Calhoun, Philadelphia, Pa., V.-P., and Hinton Booth, Statesboro, Ga., Secy.

Ga., Valdosta.—Bray Lumber Co., is reported, contemplates extending its logging line to Milltown, Ga.

Ky., Hodgenville.—Construction of an electric railway from Hodgenville to Greensburg, Ky., about 25 mi., is contemplated. A. H. Beaulieu, Taylorsville, Ky., may give information.

Ky., McRoberts.—Louisville & Nashville R. R. Co. says there is nothing whatever to the press report that it contemplates extension from McRoberts to Elkhorn City.

Ky., South Portsmouth.—Bids have been received for construction of 28 mi. of the Chesapeake & Ohio Northern Railway, and it is understood that contracts have been tentatively awarded to W. W. Boxley & Co. of Roanoke, Va.; Winston & Co. of Richmond, Va., and New York; Rinehart & Dennis of Charlottesville, Va., and the Robert Grace Contracting Co. of Pittsburgh, and will probably be confirmed. M. J. Caples, Columbus, O., is V.-P. in charge.

Md., Baltimore.—Baltimore & Ohio R. R. and Western Maryland Ry. will build joint crossing at Hanover and Donaldson Sts. and make other track changes in connection with the erection of city highway bridge. F. L. Stuart and H. R. Pratt are Ch. Engrs., respectively, at Baltimore.

Mo., Kirksville.—Louis Rich of St. Louis has contract to build the Big Creek Coal Co. spur railroad, 2 mi. long.

Miss., Bond.—Dantzer Lumber Co., it is reported, will build a logging railroad. Uriah Wrigg of Gulfport, Miss., is Engr.

N. C., High Point.—Carolina & Yadkin River Ry. is considering possibility of building extension from High Point to Greensboro, N. C., about 15 mi. Bird S. Coler, 43 Cedar St., New York, is Pres.

N. C., Todd.—Virginia & Carolina Ry. (Norfolk & Western system) has completed its extension to Todd, and as soon as the track is surfaced the line may be put in service.

S. C., Spartanburg.—Willard-Boggs Construction Co. has begun grading for three extra tracks on the Southern Ry. between Magnolia St. and N. Church St. bridge. Elkan-Tufts Contracting Co. has contract

between Magnolia St. and the Spartan Mills spur.

Tenn., Chattanooga.—Central of Georgia Ry. officials have investigated concerning contemplated extension from Rossville, Ga., to Alton Park, a Chattanooga suburb. C. K. Lawrence, Savannah, Ga., is Ch. Engr.

Tenn., Oneida.—Oneida & Western Ry. has 8 mi. of line complete and in use for freight. Route for 15 mi. is along Pine Creek to Big South Fork of the Cumberland, thence up that river 2½ mi. to White Oak Creek, and up that stream. From 15,000 to 20,000 cu. yds. of material per mile to be handled, of which 50 per cent. is rock. Maximum grade 2 per cent.; maximum curve 30 degrees. O. H. Anderson, Harriman, Tenn., is Pres.

Tenn., Curve.—H. W. Nelson, 14 S. Canal St., Chicago, Ill., is reported to have contract on the Illinois Central near Curve, which will require handling 20000 cu. yds. of material.

Tex., Marfa.—B. Q. Musgrave and others of Fort Worth, Tex., are reported planning construction of an electric interurban railway from Marfa to Ft. Davis, about 13 mi.

Va., Petersburg.—Franchise has been granted to the Petersburg & Appomattox Ry. Co. to build its proposed electric railway along the county road from Petersburg

to City Point, Va., about 12 mi. T. M. Wortham of Richmond, Va., is Pres.

Va., Petersburg.—Petersburg & James River Ry. Corp. is chartered to build line from Petersburg to City Point, Va., 11 mi.; capital \$25,000; headquarters at Petersburg. J. Walter Long, 901 Real Estate Trust Bldg., Washington, D. C., is Pres.; B. B. Wilson, V.-P., and Bestor R. Walters, Secy. and Treas., both of Washington, this being temporary organization. Permanent directors and officers will be elected when franchise along county road is obtained. Route level. Two small bridges, about 8-ft. spans, required. Electric overhead trolley system. Not decided when bids for construction and equipment will be received.

W. Va., Morgantown.—Morgantown & Wheeling Ry. Co. has completed grading from Morgantown via Cassville, Core and Pentress to Blacksville, W. Va., 24 mi., and track is laid for half the way. Bridges bought and being erected. Monongahela Valley Engineering Co., Morgantown, W. Va., and Keeley Bros. & Gilmore, contractors. Robt. D. Hennen is Ch. Engr.

## STREET RAILWAYS

N. C., Durham.—Franchise is granted by the Board of Aldermen to the Durham Traction Co. to build its proposed extension to the baseball park, about 1 mi. R. L. Lindsey is Gen. Mgr.

## MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

## "WANTS"

Acoustics.—J. T. McKnight, Judge, Maury County Court, Columbia, Tenn.—Data relative to improving acoustics of courtroom.

Barrels.—S. W. Mann, Bryson City, N. C.—Addresses of manufacturers of barrels for vinegar factory.

Bath Equipment.—Walter Scott, Athens, Tex.—Prices on bath equipment for dwelling.

Boiler.—Continental Coal Corporation, W. L. Moss, V.-P. and Gen. Mgr., Pineville, Ky.—Second-hand vertical fire tube boiler; 50 H. P., 100 lbs. pressure.

Boilers.—Continental Coal Corporation, L. E. Yoder, Ch. Engr., Pineville, Ky.—Two 150 H. P. return tubular boilers; 150 lbs. working pressure, complete with stacks and fittings.

Bolting (Flour) Cloth.—J. W. Middlebrooks, Sr., Thomaston, Ga.—Silk bolting cloth for flour mills.

Brass Rods, etc.—H. E. Johnson, Room 3 No. 12 Melinda St., Toronto, Ont., Canada. To correspond with American manufacturers of extended brass rods and brass sections; inquiring for client in England.

Brick.—See Piping, etc.

Bridge (Concrete) Construction.—Mayor and City Council, Cumberland, Md.—Bids until May 5 to construct concrete twin arch bridge across Wills Creek at Market St.; clear span of each, 65 ft.; plans and specifications obtainable off e of Jas. P. Gaffney, City Engr., on \$10 deposit. (Previously noted.)

Bridge Construction.—Randolph County Court, Thaddeus Pritt, Clerk, Elkins, W. Va.—Bids until May 4 to construct following bridges: Mill Creek bridge, on Huttons-ville and Helvetia pike, at Rosencrance's Mill near Mill Creek; bridge near Laban Currence's residence, Staunton and Parkersburg turnpike; Stone Gutter bridge, Staunton and Parkersburg turnpike; Kings Run, Beverly and Fairmont turnpike; Inners Run, Beverly and Fairmont turnpike; Stalnakers Run, Buffalo turnpike; Stone House bridge, across Cheat River near the Stone House; plans and specifications on file offices of Clerk at Elkins and of State Road Bureau, Morgantown, W. Va., and copies obtainable from latter; bridges to be constructed according to above plans or according to alternative plans and specifications filed by bidders, Court making decision. (Previously noted.)

Bridge Construction.—See Road Construction, Kaufman, Tex.

Bridge Construction.—Office State Highway Com., G. P. Coleman, State Highway Commr., Richmond, Va.—Bids at office Clerk of Carroll County, Hillsville, Va., until Apr. 30 to construct steel bridge, with concrete substructure, 120 ft. long, over Crooked Creek near Woodlawn, Va.; plans and specifications on file with County Clerk, Hillsville, and State Highway Com.; specifications furnished by Mr. Coleman.

Bridge Plans.—Anthony Bowen (Mayor), Chrmn. Comm., Fairmont, W. Va.—Correspondence with bridge engineers, view to receiving preliminary sketches and estimates on two proposed bridges; city contemplating \$400,000 bond issue.

Bridges.—Maryland State Roads Com., O. E. Weller, Chrmn., 601 Garrett Bldg., Baltimore, Md.—Bids until Apr. 27 to repair timber bridge across Severn River on Annapolis Blvd. near Annapolis; requires about 5000 ft. 12x12-in. timber and 8000 lin. ft. timber piles; contract No. 0270-B; plans and specifications obtainable from Com. for \$1.

Building Materials.—T. H. Abbey, 173 Spring St., Atlanta, Ga.—Prices on building material for number frame houses.

Building Materials.—L. Crawley, Appomattox, Va.—Prices on building materials for \$8000 to \$10,000 dormitory.

Building Material.—Rev. H. A. M. Holshouser, Winston-Salem, N. C.—Prices on building material for \$15,000 church and \$2500 parsonage.

Canal Construction.—Comms. Fifth Ward Drainage Dist. No. 1, Ellis Hoffpaul, Pres., Estherwood, La.—Bids until May 15 to dredge about 25 mi. gravity drainage canals; estimated 300,000 cu. yds. excavation.

Canal Excavation, etc.—United States Reclamation Service, Provo, Utah.—Bids until May 19 for about 30,000 yds. canal excavation and 3400 yds. reinforced concrete; work near Payson City, Utah, on San Pedro, Los Angeles & Salt Lake R. R. and Tintic branch of Denver & Rio Grande R. R.; for particulars address United States Reclamation Service, Provo, Utah, or Washington, D. C. A. P. Davis, Chief Engr.

Canning Equipment.—See Seeding (Tomato) Machinery.

Cement (Portland).—City, E. R. Conant, Purchasing Officer, Savannah, Ga.—Bids until Apr. 27 to furnish 3 carloads Portland cement, about 500 bbls.; specifications and other information on application.

Chemicals, etc.—French & Cotta, Via S. Vittore al Teatro, 19, Milan, Italy.—Interested, view to representation, in barium

products, and in chemicals, minerals, fertilizers, mineral oils, metals and raw materials for industries.

Cotton (Absorbent, etc.).—Bensussan, Sides & Co., Salonica, Greece.—Samples and price lists of medicated cottons—absorbent, carbolated and borated; also iodoform cotton gauze, etc.; view to representation.

Cotton Goods, etc.—John Murray, 24 Howard St., Glasgow, Scotland.—Interested in cotton goods, hosiery and other goods suitable to drapery trade; also hardware; view to representation on commission.

Cotton Pickery.—Cuero Compress & Warehouse Co., Cuero, Tex.—Complete equipment for cotton pickery.

Cotton Yarns.—J. W. Kyker, Newport, Tenn.—No. 8 mixed yarn in black and white, blue and white; No. 7 white.

Creamery Apparatus.—Christiansen Bros., 925 Ave. D, Miami, Fla.—Data and prices on "machine which turns butter into sweet cream."

Crushing Rolls.—Thaw & Williams, 6th and Vine Sts., Cincinnati, O.—Crushing rolls; 24 to 30-in. Symons make preferred; state condition and lowest price f. o. b. cars.

Cotton Yarn, etc.—George Koltcheff, Rue Tzar Samoyl 28, Sofia, Bulgaria.—"Equipments for spinning cotton yarn." Prices and sales terms on cotton yarn, mull yarn, brown and bleached yarn, of good quality: N N 16-1, 18-1, 22-1, 24-1, 28-1, 30-1, 32-1, 34-1, 36-1, 38-1, 40-1; in 10-lb. packages, ready for machine in factory for weaving capots and shirting; send samples.

Doors (Fire and Steel Rolling).—Port Commrs., New Orleans Court Bldg., New Orleans, La.—Bids until Apr. 28 to furnish and install fire doors and steel rolling doors, etc., for cotton warehouses and terminals; contractor to furnish bond for one-quarter amount of contract price, but not less than \$30,000; plans, etc., at office of Ford, Bacon & Davis, Engrs., 921 Canal St., New Orleans.

Drainage and Sewer Machinery, etc.—Bradley T. Johnson, Jr., engineer and surveyor, 712 Mutual Bldg., Richmond, Va.—Data and prices (for files) on general line machinery for use in connection with drainage, sewerage and sewer-disposal plants. (See Sewage-Disposal Plants.)

Drainage.—Reed Creek Drainage Dist., Dyer County, Dyersburg, Tenn.—Bids May 14 to construct about 15.4 mi. ditches, requiring about 660,000 cu. yds. earth excavation; ditches range from 14 ft. base, ½ to 1 side slopes and 7.5-ft. average cut to a 35-ft. base, 1 to 1 side slopes and 9.6-ft. average cut; floating dipper dredge work; plans obtainable from Morgan Engineering Co., Engrs., Memphis, Tenn., at following: Maps, 50 cents; profiles, 50 cents; specifications, 50 cents.

Drainage System.—Comms. Hidalgo County Drainage Dist. No. 1, Geo. B. Meriwether, Chrmn., Edinburg, Tex.—Bids until May 17 to construct ditch and levee and improve water course known as the Cibolo from point in Porcion No. 57, running eastwardly across Porciones numbered 58, 59 and 60 to point in Porcion No. 61, comprising about 90,000 cu. yds. dirt work; Engr's report, map, profile, specifications, etc., on file with C. S. Clark, Engr., Donna, and L. Gerlis, McAllen; copies of specifications, etc., obtainable on application to Drainage Commrs.

Electrical Equipment, etc.—City of Dresden, Tenn., R. L. Suddath, Mayor.—Bids at Mayor's office until May 1 for following: Boiler, 80 H. P.; 50 K. W. direct-connected engine and generator, with switchboard, wire, lamps, etc.; 500,000-gal. compound water pump; hydrants and valves; manufacturers' specifications and guarantees required.

Electric Equipment.—Morgantown & Wheeling Ry. Co., Robt. D. Hunnen, Ch. Engr., Morgantown, W. Va.—Will buy electric equipment.

Electric Plant Materials and Equipment.—McBee Electric Co., McBee, S. C.—Prices (for installation Bethune, S. C.) on following: 8 mi. No. 6 and 8 mi. No. 4 bare copper wire; 2 mi. No. 6 insulated wire copper; 5000 ft. No. 8 and No. 10 insulated wire; 10,000 ft. house wire; transformers; street hoods; cross-arms; hardware; insulators; pins, etc.

Electrical Equipment.—Rev. H. A. M. Holshouser, Winston-Salem, N. C.—Prices on electrical equipment for \$15,000 church and \$2500 parsonage.

Electrical Equipment.—Walter Scott, Athens, Tex.—Prices on electrical equipment for dwelling.



**Electric Lighting.**—L. Crawley, Appomattox, Va.—Prices on electric-lighting plant.

**Electric Wiring.**—Secy. of Dept. of the Interior, Washington, D. C.—Bids until May 11 (in duplicate) for labor and material (unless otherwise specified) required for rewiring third floor and galleries of Patent Office Bldg. at 7th and F Sts. N. W., Washington, and making all ready for service, in accordance with plans and specifications on file at office of Chief Clerk of Dept.; Po Sweeney, Asst. Secy.

**Engineers.**—See Bridge Plans.—Anthony Bowen (Mayor), Chrmn. Com., Fairmont, W. Va.

**Excavating Machinery.**—See Steam Shovels.

**Feldspar.**—Chas. R. Fife, 1012 Central National Bank Bldg., St. Louis, Mo.—Feldspar in quantities.

**Flashlights.**—Bensussan, Sides & Co., Salonica, Greece.—Illustrated catalogues, with samples, of hand searchlights and pocket lamps; give prices and terms on same, delivered Salonica, cost, insurance and freight prepaid.

**Flour and Feed Machinery.**—J. A. Graham, Box 424, San Antonio, Tex.—Equipment for flour mill of 50 to 100 bbls. capacity; also feed grinding machine.

**Furnaces.**—See Machinery, etc.—Ramon Sanchez Diaz.

**Gas Plant Machinery.**—J. L. Jones, care De Soto Abstract Co., Arcadia, Fla.—Equipment and machinery for gas plant; has franchise.

**Grading.**—Calcasieu Parish Police Jury, E. C. House, Clerk, Lake Charles, La.—Bids at office of Highway Dept. until May 4 to construct highways 6, 8, 10, 14 and 16; about 43 mi. grading; plans and specifications obtainable; Fred Shotts, Parish Engr.; E. C. House, Clerk, Police Jury. (All but highway 10 previously noted.)

**Hardware.**—See Screws, Hinges, etc.—J. J. Blow.

**Hardware.**—See Cotton Goods, etc.—John Murray.

**Heating Plant.**—L. Crawley, Appomattox, Va.—Prices on heating plant for \$8000 to \$10,000 dormitory; 36x72 ft.

**Heating Plant.**—University of South Carolina, Columbia, S. C.—Bids on extension of heating plant; plans by Wilson & Sompayrac, 1404 Palmetto Bldg., Columbia; to be completed Apr. 26 and contract let two weeks later.

**Heating Plant (Hot Air).**—F. B. Bryan, Childress, Tex.—Interested in hot-air heating system for \$2500 dwelling.

**Heating System.**—Navy Dept., Bureau Yards and Docks, H. R. Stanford, Chief of Bureau, Washington, D. C.—Bids until May 8 to furnish and install steam and hot-water distributing system, gas and cold water piping and a hot-water heater, including conduits, covering, etc., at U. S. Naval Hospital Reservation, Washington; plans and specifications (Spec. No. 2089) on application to bureau.

**Hosiery.**—See Cotton Goods, etc.—John Murray.

**Hydrants and Valves.**—See Electrical Equipment, etc.—City of Dresden, Tenn.

**Hygrometers.**—M. C. Flock, Van Bldg., Mobile, Ala.—To correspond with manufacturers of self-recording hygrometers.

**Ice Machinery.**—Thurman L. Jenkins, Milton, Ky.—Prices on 5-ton ice plant.

**Ice Machinery.**—W. F. Long, Jr., Box 745, Portsmouth, Va.—Prices from manufacturers of ice machines of 15 to 25 tons daily capacity for proposed plant of Rockingham Ice Mfg. Co., Rockingham, N. C.

**Iron (Structural), etc.**—See Machinery, etc.—Ramon Sanchez Diaz.

**Knitting Machinery.**—Sunny South Overall Co., Franklin, Va.—Addresses of manufacturers of knitting machinery.

**Lathes, etc.**—F. L. Johnson, Masonic Temple, Shepherdstown, W. Va.—To rent (with privilege of buying) or purchase new or second-hand lathes, shapers and milling machines; for machine shop and garage.

**Laundry Machinery.**—See Machinery, etc.—Ramon Sanchez Diaz.

**Levee Construction.**—T. H. Harbin, Waxahachie, Tex.—Bids until May 19 to construct levee on Chambers Creek; 175,000 cu. yds.; maps and profiles on file with Mr. Harbin; J. W. Martin, Engr.

**Locomotives.**—Crimora Manganese Corporation, A. A. Hassan, Consult. Engr., Crimora, Va.—Narrow-gauge locomotives from 28-in. up to 28-in. wanted immediately; new or second-hand.

**Looms.**—Schadewald Mills, 3d and Huntingdon Sts., Philadelphia, Pa.—25 Crompton & Knowles 72-in. looms, 4x4 box.

**Lumber.**—See Piping, etc., Baltimore, Md.

**Machinery, etc.**—Ramon Sanchez Diaz (importer and commission merchant), Bilbao, Spain.—Interested, view to representation, in machinery, iron, steel, wire, etc.; structural iron, furnaces, refrigerators, mechanical laundry apparatus and iron manufactures in general.

**Machinery, etc.**—Max B. Krusl, 960 Prospect Ave., Bronx, New York.—Interested (view to representation in Argentina, S. A.) in general line dry goods, cotton goods, hosiery and stockings, cotton duck, brushes, chemicals, machinery, brass articles (nails, etc.) and malleable iron pipes and fittings.

**Mills (Pebble), etc.**—Product Sales Co., 423 Equitable Bldg., Baltimore, Md.—Pebble mill, 22 ft. by 5 ft.; new or second-hand; also wants grinding pebbles. (See Pebbles.)

**Milling Machines.**—See Lathes, etc.—F. L. Johnson.

**Motor Cars.**—Indian Commerce & Industries Co. (mill owners, machinery and general merchants), 23 Angappa Naick St., Madras, India.—Correspondence with manufacturers of light-running motor cars: 4 or 5 seats; engine 12 to 16 B. H. P.; price not to exceed \$600 or \$700; delivered c. i. f. Madras, with accessories complete; view to representation.

FOR the benefit of business concerns, engineers, contractors, machinery manufacturers, dealers and others who find it profitable to follow up daily the industrial, commercial, railroad and financial development of the South and Southwest as published in this Construction Department,

## We issue every Business Day in the Year THE DAILY BULLETIN

The construction news as published in the Daily Bulletin is invaluable to all business people who want to keep in daily touch with the organization of business enterprises of all kinds throughout the whole South. Unlimited possibilities for the creation of business, for securing contract work, for the sale of machinery and supplies of all kinds, for bond buyers and others, are to be found through a close following up of the news in the Daily Bulletin.

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The subscription price is \$25.00 a year. Are you a subscriber to it, or an advertiser in it? If not, you are missing an opportunity for profitable business.

**Office Supplies, etc.**—S. Cohen & Co., Prinsengracht 498, Amsterdam, Holland.—Interested in office arrangements in wood and steel, carbon papers, typewriter ribbons, office machines, etc.; view to representation in Holland and the Dutch colonies.

**Paving.**—Commission Council, Baton Rouge, La.—Bids until May 15 to construct about 170,000 sq. yds. bituminous gravel pavement with concrete curb and gutter, sub-surface drainage, etc.; also about 22,000 sq. yds. hard surface pavement on concrete base; specifications and proposal forms on application; John J. Munding, City Engr.

**Paving.**—See Seawall, Sewer Extension and Street Paving.—West Palm Beach, Fla.

**Paving.**—Board of Commrs., J. W. Dashiell, Secy., Nashville, Tenn.—Bids until Apr. 29 to pave various streets with wood block, bitulithic, granite block, concrete, bituminous macadam and bitustone; separate bids for each street made on blank forms accompany specifications, which will be furnished by W. W. Southgate, City Engr.; specifications furnished for \$5; H. E. Howse, Mayor.

**Pebbles (Grinding).**—Product Sales Co., 423 Equitable Bldg., Baltimore, Md.—Pebbles; for use in pebble mill for sand.

**Pipe (Stove) Elbows.**—S. R. Biggs Iron & Motor Co., Williamston, N. C.—To correspond with manufacturers of stove pipe elbows; will contract for carloads.

**Piping.**—See Well-drilling Machinery, etc.

**Piping, etc.**—Baltimore (Md.) Board of Awards, City Hall.—Bids until Apr. 28 to furnish following: Contract No. 7 (brick)—300,000 manhole brick, 100,000 inlet brick.

Contract No. 8 (lumber)—600,000 ft. B. M. 2-in. plank, 150,000 ft. B. M. 4x6-in. timber. Contract No. 9 (vitrified pipe)—5000 ft. 8-in., 3-ft. lengths; 5000 ft. 6-in., 3-ft. lengths; 500 ft. 8-in., 2-ft. lengths; 1000 ft. 6-in., 2-ft. lengths; 500 ft. 5-in., 2-ft. lengths; 500 8-in. Y branches, 500 6-in. ¼ bends; specifications obtainable from Sewerage Com., 904 American Bldg.

**Plows.**—See Tractor Equipment (For Plowing.)

**Plumbing.**—Rev. H. A. M. Holshouser, Winston-Salem, N. C.—Prices on plumbing for \$15,000 church and \$2500 parsonage.

**Pumps.**—See Electrical Equipment, etc.—City of Dresden, Tenn.

**Rails.**—Crimora Manganese Corp., A. A. Hassan, Consult. Engr., Crimora, Va.—Rails; new or second-hand.

**Road Construction.**—Washington County Commrs., Plymouth, N. C.—Open bids May 3 to rebuild 3 mi. road; W. S. Davenport, Engr., Mackeys, N. C.

**Road Construction.**—St. Mary Parish, Chas. N. Frost, Chrmn. Police Jury and Road Commission, Franklin, La.—Bids opened May 17 to construct about 50 mi. gravel or shell and gravel surface highway; Walter Y. Kemper, Franklin, and Warren B. Reed, Morgan City, La., Consult. Engrs.

**Road Construction.**—Copiah County Dist. No. 5 Road Commrs., J. M. Dampier (of Crystal Springs, Miss.), Prest., Hazle-

**Road Construction.**—Sam J. Crum, Clerk of Wayne County, Wayne, W. Va.—Bids until May 1 to construct 3 mi. hard road between Four Pole and Twelve Pole, Ceredo Dist.; bids received on brick, concrete and asphalt; plans and specifications on file with County Clerk.

**Road Construction.**—Office State Highway Com., G. P. Coleman, State Highway Commr., Richmond, Va.—Bids at Clerk's office, Lebanon, Va., until Apr. 23 to lay macadam on 1¼ mi. Castle Run Rd.; plans and specifications on file at Clerk's office, Lebanon, and office State Highway Com., Richmond; specifications furnished on application to Mr. Coleman.

**Road Construction.**—Bureau of Yards and Docks, Navy Dept., H. R. Stanford, Chief of Bureau, Washington, D. C.—Bids until May 1 for macadam road at Navy-yard, Pensacola, Fla.; plans and specifications (Spec. No. 2155) on application to bureau or to navy-yard named.

**Road Construction.**—Dorchester County Commrs., Cambridge, Md.—Bids until May 11 to construct section State-aid highway upon or along Nanticoke River Rd. between Vienna and Hollands Cross Rds.; length, 2 mi.; width, 9 ft.; shell macadam; bids to be made on blank forms obtainable from State Roads Com., 601 Garrett Bldg., Baltimore; plans can be seen and forms of specification and contract obtained from Com. for \$1. R. H. Dixon, Jr., Roads Engr., Cambridge.

**Road Construction.**—Road Commrs. Kaufman County Justice Precinct No. 2 (Forney), Kaufman, Tex.—Bids until May 11 to construct system of permanent roads and bridges; \$200,000 available; plans and specifications on file with C. C. O'Neal, Engr., Forney, Tex.; bids to be addressed to Jas. A. Cooley, County Judge.

**Road Machinery and Materials.**—W. L. Waters, County Commr., Alexander City, Ala.—Data, catalogues and prices on road-working tools and implements.

**Roller (Steam Road).**—Frank J. Stamm & Son, St. Petersburg, Fla.—4 to 8-ton steam roller; good condition.

**Sanitary Fixtures, etc.**—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until May 5 to furnish sanitary fixtures, range boilers, steel and iron castings, stay-bolt iron, pig iron, bronze bars, bronze wire netting, brass tubing, door bolts, hinges, door hooks, shutter knobs, reamers, files, hoes, cant-hook handles, magnesia pipe covering, glue, putty, turpentine, etc.; blanks and general information relating to this circular (No. 218) may be obtained from this office or offices of assistant purchasing agents, 21 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1066 North Point St., San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

**Sawmill.**—Gray Lumber Co., Waverly, Va.—6-ft. band mill complete, with light steam feed and carriage; Filer & Stowell, second-hand, not over 2 or 3 years used preferred.

**Sawmill.**—Dorsey L. Brown, Grafton, W. Va., Route 5, Box 92.—Prices on 30 H. P. portable sawmill.

**Scales.**—United Supply Co., High Point, N. C.—Device to weigh anhydrous ammonia.

**Screws, Hinges, etc.**—J. J. Blow, importer and manufacturer, 104 High Holborn, W. C., London, England.—To represent American manufacturers of screws, hinges, novelties, etc.

**Seawall, Sewer Extension and Street Paving.**—City Council, West Palm Beach, Fla.—Bids at office of A. M. Lopez, City Clerk, until May 7 to construct (including construction, labor, material, machinery and equipment) seawall, improvements to sanitary sewer system and additional street paving as follows: Seawall, 1350 cu. yds. reinforced concrete, 73.4 tons steel reinforcement, 11,460 lbs. anchor rods, bolts, nuts and washers, 5720 lin. ft. 10-in. round pile, 39,423 cu. yds. fill, 2415 sq. yds. sidewalk; sanitary sewers, 16,660 ft. 8-in. average depth 4.6 ft.; 3360 ft. 10-in. average depth 4.5 ft.; 1315 ft. 12-in. average depth 4 ft.; 43 manholes, 19 automatic flush tanks, 5 lampholes, necessary Y branches; street paving, 40,000 sq. yds. macadam pavement, 23,500 sq. yds. rock surfacing, 554 cu. yds. grading; plans and specifications at office of president of council and with Engr., and blanks obtainable from Engr., J. B. Mc-

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Crory Co., 1408 Third National Bank Bldg., Atlanta, Ga.

**Seeding (Tomato) Machinery.**—Lowell R. Gaidry, New Orleans, La.—Machine to separate seed from pulp of macerated ripe tomatoes.

**Sewage-Disposal Plants.**—Bradley T. Johnson, Jr., engineer and surveyor, 712 Mutual Bldg., Richmond, Va.—Descriptive data on sewer-disposal plants, including full information on Imhoff tank. (See Drainage and Sewer Machinery, etc.)

**Sewer Construction.**—See Seawall, Sewer Extension and Street Paving.—West Palm Beach, Fla.

**Sewer Construction.**—Board of Improvement, Sewer Dist. No. 1, Siloam Springs, Ark.—Bids until May 12 for sanitary sewer system; 3000 ft. 15-in. sewer pipe, 400 ft. 12-in., 5500 ft. 10-in., 26,900 ft. 8-in. and 16,800 ft. 6-in.; 900 6-in. on 8-in. Y's and 900 6-in. on 6-in. Y's; 300 ft. 10-in. cast-iron pipe; for excavating 17,800 ft. trench, 6 to 4 ft. deep; 29,100 ft. 4 to 6-ft., 7500 ft. 6 to 8-ft., 1800 ft. 8 to 10-ft., 200 ft. 10 to 12-ft., 300 ft. 12 to 14-ft. and 100 ft. 14 to 16-ft.; 135 manholes; 120 ft. additional depth of manholes; 12 flush tanks, etc.; excavating 300 cu. yds. rock in trench; 500 cu. yds. earth and 600 cu. yds. rock at disposal plant; building disposal plant; plans and specifications on file offices Secy. and Engrs., and copies obtainable from Winters & Dove, Engrs., 311 Merchants' National Bank Bldg., Fort Smith, Ark., for \$5.

**Shapers.**—See Lathes, etc.—F. L. Johnson.

**Silk.**—See Bolting (Flour) Cloth.

**Sprinkler System.**—Navy Dept., Bureau Yards and Docks, H. R. Stanford, Chief, Washington, D. C.—Bids until May 1 for automatic sprinkler system for pattern-shop building 42-E, Navy-yard, Boston; plans and specifications on application.

**Steam Shovels.**—Crimora Manganese Corp., A. A. Hassan, Consult. Engr., Crimora, Va.—Steam shovels, excavators; new or second-hand.

**Steel Work.**—Greenville County Jail Commrs., J. I. West, Chrmn., Greenville, S. C.—Bids until May 10 for steel work in county jail; plans and specifications at office of Joe T. Lawrence, Archt., Greenville; further information from jail commission or architect.

**Steel (Cold Rolled, Soft).**—Automatic Crawler Corporation, Norfolk, Va.—Addresses of manufacturers of soft cold-rolled steel in small sizes.

**Tanks (Cypress).**—Tucker Rose Oil Co., Shreveport, La.—Two cypress tanks, capacity 1250 bbls. each, f. o. b. cars Crichton, La.

**Textiles, etc.**—Sigmund Rosenthal, Brajla, Roumania.—Interested (view to representation) in cotton thread, cotton in bales, cotton fabrics of various kinds, woolen fabrics, bags, cotton-seed oil, sulphate of copper, untanned leather, tanned leather and box and calf kid, etc.

**Tractor Equipment (For Plowing).**—Julius J. Wittal, M. E. (American correspondent, Royal Hungarian Commercial Museum), South Ferry Bldg., 1 State St., New York.—Interested in easily-operated tractor outfits for plowing; for representation Southern Hungary.

**Vinegar Machinery.**—S. W. Mann, Bryson City, N. C.—Addresses of manufacturers of machinery for vinegar plant.

**Weighing (Anhydrous Ammonia) Device.**—See Scales.

**Washing (Manganese) Machinery.**—Crimora Manganese Corp., A. A. Hassan, Consult. Engr., Crimora, Va.—Manganese washing machinery.

**Well-drilling Machinery, etc.**—Point Pleasant Oil Co., 204 Weis Bldg., New Orleans, La.—Prices on drilling machinery and piping.

**Well Drilling.**—A. H. McInnis, Secy., Key West Board of Trade, Key West, Fla.—To correspond with contractors for artesian wells.

**Wire.**—J. J. Blow, importer and manufacturer, 104 High Holborn, W. C., London, England.—Southern manufacturers to cable lowest price 12,000 tons monthly annealed or cheapest barbed wire; cash against documents, f. o. b. New York, stating individual monthly deliveries and commission paid.

**Wire Fencing.**—Carolina Machinery & Mfg. Co., Sumter, S. C.—Names and addresses of fence wire manufacturers.

## FINANCIAL NEWS

### FINANCIAL CORPORATIONS

Ala., Birmingham.—Windsor Realty & Trust Co. incptd.; capital \$5000; H. M. Horton, Prest. and Treas.; J. E. Jones, V.-P., and T. W. Hawkins, Secy.

Ala., Piedmont.—Farmers & Merchants' Bank incptd.; capital \$15,000. C. N. Thompson, Prest.; John H. Barker, V.-P.; J. F. Morgan, Cash. Business began April 9.

Ark., Rogers.—American National Bank of Rogers, capital \$50,000, has made application to organize. J. T. Howard, J. E. Applegate, A. Moore, W. E. Kefauver and W. A. Miller, organizers.

Ga., Hogansville.—Planters' Bank, which succeeds the Merchants and Farmers' Bank of Hogansville, is chartered; capital \$25,000; C. V. Truitt and others, incorporators. (Previously noted.)

Ga., Whigham.—Merchants & Planters' Bank is being organized by R. S. Lenhardt, representing the Witham system. Business is expected to begin about May 1.

Ky., Murray.—Murray National Bank has made application to organize; capital \$25,000. Organizers: T. H. Stokes, L. G. Woodruff, W. T. Slidd, B. B. Kops and W. E. Marberry.

La., New Orleans.—The Reliable Life Insurance Co. of Louisiana, capital \$150,000, is being organized with the following officers: Louis Hufft, Prest.; M. M. Bradburn, 1st V.-P.; J. H. Schluter, 2d V.-P.; John Ellerman, 3d V.-P.; John F. Kumpfert, Secy. and Treas.; William Pfaff, Treas.

La., Shreveport.—The Oil Exchange National Bank is being organized with \$300,000 capital by J. B. Alken and W. A. Stephens. Offices will be in the new Ward Bldg., corner of Marshall and Milam Sts.

Md., Brunswick.—A new bank with \$25,000 capital is being organized by W. D. Washington and J. D. Brown of Lovettsville, Va.; F. L. Spitzer and J. L. Karn of Brunswick and J. Lee Simmons, Adamstown.

Miss., Columbus.—The Columbus National Bank is approved; capital \$100,000. Organizers: B. A. Weaver, T. O. Burris, T. B. Franklin, S. Kaye and C. L. Lincoln.

Miss., Tupelo.—The Tupelo Building and Loan Assn. chartered; expects to begin business about May 1; capital not to exceed \$100,000. M. E. Leake will be Prest. and J. N. Berry Secy. and Treas.

N. C., City Point.—Bank of City Point incptd.; capital \$15,000 to \$100,000. T. F. Heath, Prest., Petersburg; E. F. Johnson, V.-P., City Point; B. B. Jones, Secy., Petersburg.

Okla., Byron.—First National Bank, capital \$25,000, has made application to organize. J. D. Howard, N. L. Travers, H. E. Bishop, Emma Cockrell, W. H. Clark and W. F. Brown, organizers.

Okla., Cushing.—E. J. Azulay Abstract Co. chartered; capital \$5000; incorporators, E. J. Azulay and Henry Ousler of Cushing and Datus E. Sater of Stillwater.

Okla., Drumright.—Drumright Investment Co., capital \$20,000, is incptd. by Frank Alford, J. H. Garrison, Earl Foster and H. Boyles of Drumright.

Okla., Gray.—First State Bank is organized with \$10,000 capital and \$1000 surplus; N. E. Nance of Guyton, Okla., Prest.; W. H. Sharer, Cashr., and John A. Davis, V.-P. Business began Apr. 3.

Okla., Idabel.—Citizens' National Bank, capital \$25,000, has made application to organize. C. L. Eilers, J. E. Dooley, E. M. Fulmer, J. W. Dewitt and W. H. Thompson, organizers.

Okla., Mangum.—The Bank of Mangum, which succeeds the Bank of Vinson, is incorporated; capital \$25,000; W. P. Ponder, Prest.; W. D. Dawson, V.-P.; James Duffy, Cashr.

Okla., Oklahoma City.—Southwest Securities Co. of Belle Isle Station is chartered; capital \$90,000; incorporators, C. L. Webb, P. R. Galyon, M. V. Jeffers, J. K. Wright, M. J. Straight, R. Zimmerman, C. C. McGilvary of Oklahoma City.

Okla., Rosston.—First National Bank of Rosston is approved; capital \$25,000. Directors: D. H. Walker, G. White, J. F. Fair and A. M. Van Laningham.

Okla., Tupelo.—Bank of Commerce is organized with \$10,000 capital by J. G. Loving of Coalgate, Prest.; R. E. Galloway, V.-P., and Price Statler, Cashr., both of Tupelo.

Okla., Tulsa.—Tulsa-Jennings Investment Co. chartered; capital \$5000; incorporators,

E. R. Albert, H. A. Kolb, D. G. Powell and J. M. Shields.

S. C., Bennettsville.—People's Bank of Bennettsville has made application to convert into the People's National Bank; capital \$50,000.

S. C., Walterboro.—Security Loan & Trust Co., incptd.; capital \$25,000; Jas. E. Peurifoy, Prest. and Treas.; C. G. Padgett, V.-P.; L. B. Houck, Secy. Business is to begin immediately.

Tenn., Athens.—Conversion of the Athens Bank & Trust Co. into the Citizens' National Bank of McMinn County is approved; capital \$50,000.

Tex., Hawkins.—First National Bank of Hawkins chartered; capital \$30,000. This succeeds the First State Bank of Hawkins.

Va., Portsmouth.—Citizens' Savings and Loan Corporation, capital \$30,000 to \$50,000, is organized with the following officers: R. J. Davis, Prest.; W. Clarke Moore, 1st V.-P.; Dr. L. J. Roper, 2d V.-P.; C. L. Murphy, Treas.; Robert H. Quayle, Secy. Business is expected to begin early in May.

### NEW SECURITIES

Ala., Birmingham.—Steps are being taken to issue the \$1,250,000 of floating indebtedness bonds recently voted. H. S. Ryall is City Clerk.

Ala., Huntsville.—\$40,000 5 per cent. 30-year high-school bonds have been purchased at par by L. M. Weathers & Co., Memphis.

Ala., Northport.—Election is to be held May 17 to vote on \$16,000 water-works and sewer bonds. C. P. Bell is Mayor.

Ark., Almyra.—\$10,000 6 per cent. 10-30-year, \$500 Almyra Special School Dist., Arkansas county, building bonds, dated Apr. 1, 1915, have been purchased by Gunter & Sawyers of Little Rock. Mr. Burnett is Secy. of Dist. at Almyra.

Ark., Bates.—\$10,000 school district bonds were purchased by Gunter & Sawyers of Little Rock.

Ark., Blevins.—\$10,000 6 per cent. 5-30-year, \$500 building bonds Blevins Special School Dist., Hempstead county, dated May 1, 1915, have been purchased by Gunter & Sawyers, Little Rock, Ark.

Ark., Desha.—\$15,000 6 per cent. 5-25-year, \$500 refunding bonds of Desha-Drew Special School Dist., Independence county, dated Apr. 1, 1915, have been purchased by Gunter & Sawyers, Little Rock, Ark.

Ark., Doyleville.—\$5000 6 per cent. 10-35-year, \$500 bonds Doyleville Special School Dist., White county, dated Apr. 1, 1915, have been purchased by Gunter & Sawyers of Little Rock, Ark.

Ark., England.—\$22,000 school bonds are to be put on the market. Address School Board.

Ark., Hampton.—\$6500 of school bonds sold to Gunter & Sawyers of Little Rock.

Ark., Houston.—\$10,000 school bonds awarded to Gunter & Sawyers of Little Rock.

Ark., Little Rock.—\$45,000 5½ per cent. bonds East End Sewer Dist. No. 78 have been purchased by the Union Trust Co., Little Rock.

Ark., Moro.—\$12,000 6 per cent. 5-20-year bonds, \$500 Moro School Dist., Lee county, dated Apr. 1, 1915, have been purchased by Gunter & Sawyers of Little Rock. Paul Westbrook is Secy. Moro Dist.

Ark., Sheridan.—\$160,000 6 per cent. 1-30-year, \$500 bonds Road Improvement Dist. No. 1, Grant county, have been purchased by Gunter & Sawyers, Little Rock, Ark. M. W. Elkins is Secy. at Sheridan.

Fla., Brooksville.—\$10,000 6 per cent. 20-year school bonds were purchased by Florida Loan & Mortgage Co. of Gainesville at par and accrued interest.

Fla., Clearwater.—Election is to be held in May to vote on \$20,000 6 per cent. \$500 bonds School Dist. No. 2, Pinellas county. D. N. Hollins is Secy. Board of Public Instruction.

Fla., DeLand.—Bids will be received until 3 P. M. May 10 for \$12,500 5 per cent. \$500 bonds Special Tax School Dist. No. 14, Volusia county; dated July 1, 1914; maturity July 1, 1929 to 1934. George F. Crouch is Chrmn. and C. R. M. Sheppard Secy. Board of Public Instruction, Volusia County.

Fla., Fellsmere.—Bids will be received until Apr. 30 for \$25,000 6 per cent. bonds Special Tax School Dist. No. 14, St. Lucie county; denomination \$1000; maturity Apr. 1, 1925, to Apr. 1, 1935. Address Board of Public Instruction St. Lucie County, Geo. A. Saeger, Chrmn., Fort Pierce, Fla.

Fla., Fort Meade.—\$25,000 5 per cent. 20-year bonds Special Tax School Dist. No. 4,

Polk county, are voted, and bids for same will be received until 10 A. M. May 11. C. W. Parker is Secy. oBard Public Instruction, Polk county, at Bartow.

Fla., Miami.—\$100,000 5 per cent. bonds Homestead Special Road and Bridge Dist., Dade county, bonds are voted. S. A. Belcher is Chrmn. County Commrs.

Fla., Miami.—\$15,000 6 per cent. bonds Homestead Special Tax School Dist. No. 9, Dade county, are voted and bids for same will be received until May 11. Address R. E. Hall, Secy. School Board, Miami.

Fla., Milton.—\$20,000 6 per cent. 20-year school bonds bought by Gunter & Sawyers of Little Rock.

Fla., Pensacola.—Bids will be received until 2 P. M. May 17 for \$400,000 4½ per cent. 30-year \$1000 municipal dock and belt-line railroad bonds, dated Oct. 1, 1913, maturing Oct. 1, 1943. A. Greenhut is Mayor and C. W. Eggart City Clerk.

Fla., St. Petersburg.—Election is to be called to vote on \$150,000 bonds for erection of Concordium in St. Petersburg. Address The Mayor.

Fla., St. Petersburg.—Petition is to be circulated calling for an election to vote on \$100,000 school bonds. Address School Board.

Fla., Tavares.—Bids will be received until May 10 for \$15,000 6 per cent. 20-year bonds Tavares Special Tax School Dist., Lake county. W. T. Kennedy is Supt. Public Instruction.

Fla., Tavares.—\$10,000 Clermont-Minneola Dist. and \$10,000 Umatilla Dist., Lake county, bonds have been sold. W. G. Kennedy is Supt. Public Instruction Lake County.

Fla., West Palm Beach.—\$100,000 municipal improvement bonds were purchased by John Nuveen & Co., Chicago.

Ga., Chatsworth.—Election is to be held in Murray county May 21 to vote on \$50,000 6 per cent. courthouse bonds; denomination \$1000. Jesse M. Sellers is County Clerk, at Chatsworth, Ga.

Ga., Ellaville.—Bids will be received until noon April 30 for \$10,000 5 per cent. 20-year \$500 school bonds. C. L. Battle is Clerk of Council.

Ga., Toccoa.—Election is to be held May 12 to vote on \$35,000 5 per cent. \$1000 municipal electric-light-plant bonds. Claude Bond is Mayor and H. J. Cox, City Clerk.

Ga., Waynesboro.—Election is to be held to vote on \$19,000 5 per cent. school bonds; dated Sept. 1, 1915; denomination \$500. Address School Board.

Ky., Barbourville.—Bids will be received until 1 P. M. May 1 for \$16,500 6 per cent. 10-30-year school district bonds. W. C. Black is Chrmn. School Board.

Ky., Dayton.—Bids will be received until 8 P. M. May 17 for \$134,000 4 per cent. 20-year renewal and refunding \$500 bonds. W. C. Quinby is Mayor and Will C. Martin, City Clerk. Further particulars will be found in the advertising columns.

Ky., London.—\$100,000 Laurel county road bonds are voted. Address County Commrs.

Ky., Owensboro.—Election is to be held in Daviess county June 22 to vote on \$600,000 road bonds. Address County Commrs.

Ky., Wickliffe.—Bids are being received for \$300,000 5 per cent. 5-30-year \$1000 Ballard county road and bridge bonds. Henry F. Turner is County Atty.

La., Alexandria.—Elections are to be held in the following districts of Rapides parish to vote on school bonds: Glenmora Dist., \$25,000 6-year bonds, and Poland Dist., \$16,000 20-year bonds. Address Parish School Board.

La., Covington.—\$5500 (not \$55,000 as previously reported) of 5 per cent. 5-year \$500 school bonds Dist. No. 5, St. Tammany parish, have been purchased by Covington Bank & Trust Co., Covington.

La., Estherwood.—Bids will be received until 3 P. M. May 15 for \$38,000 5 per cent. 32-year bonds Fifth Ward Drainage Dist. No. 1, Acadia parish. Ellis Hoffpaur is Prest.

La., Plaquemine.—Bids will be received until Apr. 26 for \$80,000 5 per cent. 10-year road bonds of Iberville parish. Address W. A. Holloway, Prest. Police Jury.

Md., Hagerstown.—Bids will be received until noon May 4 by Harry McC. Stouffer, City Tax Collector, for \$50,000 park bonds; denomination \$1000.

Miss., Holly Springs.—\$15,000 6 per cent. 30-year street bonds are sold. A. Herr is Mayor.

Miss., Jackson.—The election to vote on \$65,000 school bonds is to be held June 1. L. A. Scott is City Clerk.

Miss., Laurel.—Bids will probably be opened about May 15 for \$60,000 5 per cent. 20-year street, school and water-works \$1000 bonds. Address D. F. Gardiner.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.



Miss., Ripley.—Election was held Apr. 20 to vote on \$13,000 6 per cent. bonds for schools and paying off outstanding indebtedness; dated June 1, 1915. Sam Nelms is Mayor and H. R. Spight, Clerk.

Miss., West Point.—Board of Supervisors Clay County is offering for sale \$20,000 road bonds Dist. No. 2.

Miss., West Point.—City will purchase the \$12,000 6 per cent. 10-year sewer bonds voted Apr. 13. D. Cottrell is Mayor.

Mo., Maryville.—Bids will be received until 10 A. M. May 7 for \$30,000 6 per cent. Hughes township, Nodaway county, road bonds. Denomination \$500; maturity July 1, 1916, to July 1, 1930, inclusive. Address Fred J. Yeomans, County Clerk.

Mo., Ozark.—Petitions are being circulated in Christian county asking that an election be held to vote on \$50,000 courthouse bonds. Address County Comms.

Mo., Plattsburg.—\$30,000 5 per cent. 5-30-year high-school building bonds are voted. Address Board of Education.

Mo., Richmond.—\$70,000 Richmond School Dist., Ray county, bonds are voted. Address Board of Trustees.

Mo., St. Joseph.—Election to vote on \$650,000 10-20-year school and \$25,000 15-year library addition bonds St. Joseph School Dist. is to be held Apr. 24. A. L. Loving is Dist. Secy.

N. C., Benson.—The \$30,000 6 per cent. 30-year School Dist. No. 1 (Banner White), Johnston county, bonds have been purchased by Sidney, Spitzer & Co., Toledo, O. The sale was made privately, subject to election, which will be held May 18. J. H. Rose is Secy. School Board.

N. C., Bladenboro.—\$200 electric-light bonds are voted. Address The Mayor.

N. C., Bakersville.—Bids will be received until May 3 for \$30,000 Mitchell county road and bridge bonds. D. W. Tipton is Chrmn. Board Comms. Mitchell County.

N. C., Bryson City.—\$100,000 5 per cent. 10-30-year \$500 bonds Swain Road Dist., Swain county, were purchased by C. M. Malone & Co., Asheville, at 91.

N. C., Chapel Hill.—Election to vote on \$35,000 graded school district bonds will be held May 18. Mr. N. W. Walker is Secy. School Board.

N. C., Charlotte.—Bids will be received until noon May 18 for \$215,000 5 per cent. \$1000 Mecklenburg county funding bonds; dated May 1, 1915; due \$10,000 yearly, May 1, 1916 to 1935, inclusive, and \$15,000 May 1, 1936. Address Board of County Comms., A. M. McDonald, Chrmn.

N. C., Elizabeth City.—Bids will be received until noon May 3 for \$4000 5 per cent. Pasquotank county jail-improvement \$1000 bonds. Address Board of County Comms., J. G. Fearing, Chrmn.

N. C., Henderson.—Election to vote on \$50,000 Vance county road bonds will be held June 1. Address County Comms.

N. C., Lumberton.—Bids will be received until noon May 3 for \$15,000 6 per cent. \$500 bonds Back Swamp and Jacob Swamp Drainage Dist. Dated August 1, 1915; payable August 1, 1925. G. B. Sellers is Chrmn. Board of Drainage Comms. Further particulars will be found in the advertising columns.

N. C., Mount Olive.—Election to vote on \$6000 5 per cent. 20-year \$500 Mount Olive Graded School Dist., Wayne county, bonds will be held May 11. Address Albert S. Grady. (Previously noted.)

N. C., Newbern.—The \$10,000 17-year and \$25,000 32-year 5½ per cent. Craven county funding bonds recently reported sold were purchased by Sidney Spitzer & Co., Toledo, O., at par and interest.

N. C., Pittsboro.—Bids will be received until noon May 15 for \$50,000 5 per cent. 40-year Matthews township, Chatham county, \$100, \$500 or \$1000 road bonds. Address Board of Trustees, Matthews township; Siler & Milliken, Attys., Siler City, N. C.

N. C., Plymouth.—\$30,000 6 per cent. 25-year \$500 and \$1000 Washington county bonds have been purchased by C. W. McNear & Co., Chicago, at premium of \$3025.

N. C., Raleigh.—Bids will be received until noon May 3 for \$100,000 5 per cent. 30-year \$1000 Wake county courthouse and jail bonds. Address Board of Comms. Wake county, John A. Mills, Chrmn.

N. C., Red Oak (R. F. D. from Rocky Mount).—Election is to be held May 15 to vote on \$12,500 6 per cent. 5-20-year Red Oak School Dist., Nash county, bonds. J. B. Boddie is Clerk Board County Comms. at Nashville.

N. C., Roxboro.—Election is to be held May

11 to vote on \$75,000 Person county road-improvement bonds. W. E. Webb is Clerk.

N. C., Southport.—\$40,000 5½ per cent. 30-year water and sewer bonds have been purchased at par by John B. McCrary Co., Atlanta, Consult. Engr.

N. C., Taylorsville.—Bids will be received until 9 A. M. Apr. 26 by W. A. Barnett, Register of Deeds, to Clerk Board of Comms. Alexander county for \$150,000 5 per cent. road-improvement bonds; denomination \$1000; dated Apr. 1, 1915; maturity Apr. 15, 1945 to 1955.

N. C., Warrenton.—Election is to be held May 17 to vote on \$50,000 5 per cent. water and sewerage bonds. John W. Allen is Mayor.

N. C., Wilmington.—The \$100,000 5 per cent. floating indebtedness bonds, recently reported sold, were purchased by Bond & Goodwin of New York. P. Q. Moore is Mayor.

N. C., Yadkinville.—Yadkin county will issue \$60,000 of road bonds. Address County Comms.

N. C., Zebulon.—Election will soon be held to vote on \$8000 electric-light and \$2000 street-improvement 6 per cent. bonds. Address T. J. Horton.

Okl., Cushing.—Election is to be called to vote on \$50,000 park bonds. Charles E. Droege is Mayor.

Okl., Holdenville.—\$6000 fire-department bonds are voted. Address The Mayor.

Okl., Tulsa.—\$250,000 5 per cent. 5-20-year Tulsa county bonds for bridge across Arkansas River at Tulsa are voted, and bids for same will be received until 2 P. M. May 4; dated April 12, 1915; maturing 1920 to 1935. Address County Comms., A. W. Lucas, C. S. Avery and Earle Baker. Further particulars will be found in the advertising columns.

S. C., Cades.—\$5500 Cades school bonds were recently purchased by a Chicago firm. Address Board of Education.

S. C., Columbia.—Richland county will issue \$1,250,000 road bonds. Address County Comms.

S. C., Hemingway.—The \$15,000 school district bonds recently voted are 20-year 4½ to 5 per cents. Address L. W. Gilland, Kings-tree, S. C.

S. C., Winnsboro.—\$50,000 water-works, \$20,000 sewerage and \$10,000 electric-light 5 per cent. 20-40-year bonds have been purchased by Southern Securities Co. of Spartanburg at par and accrued interest. C. A. Robinson is Mayor.

S. C., Yorkville.—The First National Bank of Yorkville has been awarded the following York county loans: \$30,000 at 4½ per cent., for operating expenses, and \$10,000 at 5 per cent. for furnishing new courthouse.

Tenn., Benton.—Bids will be received until noon June 2 by William Prince, Chrmn., Polk county, for \$85,000 5½ per cent. county bonds; dated Apr. 1, 1915; denomination \$1000.

Tenn., Carthage.—\$15,000 6 per cent. 25-year \$1000 bonds for high-school building are voted, and bids for same will be received until noon May 1; dated Apr. 1, 1915; maturity Apr. 1, 1940. A. C. Read is Mayor. Further particulars will be found in the advertising columns.

Tenn., Chattanooga.—\$25,000 5 per cent. 30-year Hamilton county road bonds have been purchased by R. M. Grant & Co., Chicago, at 103.41, or a premium of \$82.50; denomination \$1000; dated May 1, 1915; maturity May 1, 1945. Will Cummings is County Judge.

Tenn., Clarksville.—\$47,100 5 per cent. 10-30-year refunding bonds were purchased by Kissel, Kinnicut & Co., Chicago, Ill., at \$354 premium.

Tenn., Cleveland.—City will issue \$150,000 of bonds as follows: Sewerage system, \$75,000; street paving, \$60,000; city hall, \$15,000. Address The Mayor.

Tenn., Dresden.—About \$146,000 6 per cent. 5-20-year bonds of the Middle Fork and Spring Creek Drainage and Levee Dist. No. 1, Weakley county, were purchased at par and accrued interest by R. H. and G. A. McWilliam, contractors, of Memphis and Chicago.

Tenn., Dyersburg.—Bids will be received May 14 for bonds of Reeds Creek Drainage Dist., Dyer county. Address Directors of Dist. at Dyersburg.

Tenn., Madisonville.—Election is to be held July 15 to vote on \$300,000 5 per cent. 15-25-year Monroe county road bonds. Address County Comms.

Tenn., Manchester.—Plans are being made to place on the market \$8000 school bonds. Address Board of Education.

Tenn., Maryville.—Bids will be received until noon May 10 for \$55,000 5 per cent. 30-

year water-works bonds. Sam Everett is Mayor.

Tenn., Memphis.—\$1,500,000 electric-light plant bonds are voted. C. T. Pathby is City Clerk.

Tenn., Memphis.—Election ordinance is to be introduced in the City Council providing for an issue of \$15,000 refunding 4½ per cent. bonds. E. H. Crump is Mayor.

Tenn., Millington.—Bids will soon be opened for \$10,000 6 per cent. school bonds. F. J. Clampt is Secy. and Treas. Board of Education.

Tenn., Millington.—\$10,000 6 per cent. school bonds will soon be put on the market. F. J. Clampt is Secy. and Treas. Board of Education.

Tenn., Nashville.—Election is to be held in Nash county May 15 to vote on \$15,000 of North Whitakers, South Whitakers, Dry Wells and Coopers townships, Nash county, road bonds; denomination \$500. Address County Comms.

Tenn., Nashville.—Bids will be received until noon May 12 for \$100,000 10-30 year Davidson county bonds. W. M. Pollard is County Judge.

Tenn., Nashville.—Bids will be received until noon May 6 for \$11,781,000 State of Tennessee serial refunding bonds; dated July 1, 1915; denomination \$1000; interest, 4, 4½ or 4¾ per cent.; T. C. Rye, Governor; J. B. Thomason, Comptroller; Porter Dunlap, Treas., and R. R. Sneed, Secy. of State, Funding Board State of Tennessee.

Tenn., Newport.—Election is to be held in Cocke county May 15 to vote on \$300,000 road bonds. Address W. E. Bible, Geo. W. Gornell and Frank Huff, Comms.

Tenn., Tazewell.—\$380,000 Claiborne county highway bonds are voted. Address County Comms.

Tenn., Waverly.—Election is to be held in Humphreys county May 1 to vote on \$250,000 road bonds. Address County Comms.

Tex., Angleton.—\$150,000 Dist. No. 6 and \$20,000 Dist. 11, Brazoria county road bonds are being offered. Address County Comms.

Tex., Austin.—The Attorney-General has approved the following securities: \$5000 5 per cent. 40-year bonds Common School Dist. No. 17, Tyler county; \$1800 5 per cent. 5-20-year bonds Jones County Dist. No. 11; \$400,000 5 per cent. 40-year bonds Hunt County Road Dist. No. 1.

Tex., Austin.—Election is to be held about June 1 to vote on \$250,000 school, \$275,000 street and bridge, \$50,000 sewer and \$25,000 fire-alarm-system bonds. Address A. P. Woodridge, Mayor.

Tex., Ballinger.—\$120,000 Runnels county road bonds defeated.

Tex., Ballinger.—Election is to be held in Runnels county to vote on \$15,000 bridge bonds. Address County Comms.

Tex., Beeville.—Steps are being taken to hold an election in Bee county to vote on hospital bonds. Address County Comms.

Tex., Bonham.—\$10,000 school bonds have been purchased by a St. Louis firm. Address Mayor Spangler.

Tex., Cameron.—\$9000 of 5 per cent. 20-40-year bonds of Milam County Road Dist. No. 2 (being balance of \$150,000 issue) have been purchased by J. L. Arlitt of Austin, Tex.

Tex., Cleburne.—\$302,000 sewer and school bonds have been purchased by the Harris Trust & Savings Bank of Chicago at \$1010 premium and accrued interest.

Tex., Cold Springs.—\$75,000 San Jacinto county courthouse bonds are to be issued, but date of election has not yet been decided. Wm. McMurray is County Judge.

Tex., Columbia.—Election is to be held to vote on \$20,000 road bonds. Address The Mayor.

Tex., Concho.—Concho School Precinct has voted \$4500 of school bonds. Address School Comms.

Tex., Greenville.—\$400,000 5 per cent. 40-year bonds Hunt County Road Dist. No. 1 have been purchased by H. G. Norwood of Hunt county and former Comptroller W. P. Lane.

Tex., Hallettsville.—Election is to be held May 5 to vote on \$50,000 road-improvement bonds Dist. No. 1, Lavaca county. Address County Comms.

Tex., Haslet.—\$10,000 bonds Haslet Common School Dist., Tarrant county, defeated.

Tex., Kountze.—Bids will be received until 11 A. M. May 3 for \$150,000 bonds Hardin County Road Dist. No. 1. W. W. Dies is County Judge.

Tex., Littlefield.—The \$15,000 Dist. No. 4 school bonds to be voted on May 1 are 20-40-year 5 per cents; denomination \$500; \$10,000

of the issue will be offered soon. W. G. Street is Secy. School Board.

Tex., Lockney.—Bids will be received until 5 P. M. May 10 for \$7500 5 per cent. 10-40-year Lockney Independent School Dist. bonds. William McGeehee is Prest. School Board. Further particulars will be found in the advertising columns.

Tex., Longview.—\$300,000 Gregg county road bonds have been purchased by the First National Bank of Longview.

Tex., McKinney.—Bids will be received by J. L. Franklin, County Auditor, until noon June 6 for all or any part of the following 5 per cent. 20-40-year road bonds: \$375,000 Dist. No. 4; \$200,000 Dist. No. 8, and \$300,000 Dist. No. 9; denomination \$1000. Further particulars will be found in the advertising columns.

Tex., Port Lavaca.—\$35,000 5 per cent. 40-year bonds Road Dist. No. 2, Calhoun county, defeated.

Tex., Port Lavaca.—Election is to be held May 18 to vote on \$17,000 5 per cent. 10-40-year street bonds. H. C. Innis is Mayor and A. A. Ames City Secy.

Tex., Taylor.—\$100,000 5 per cent. 40-year street-paving bonds are voted. A. V. Hyde is Clerk.

Tex., Yoakum.—\$50,000 road bonds Dist. No. 2, DeWitt county, are voted. Address County Comms.

Va., Norfolk.—Bids will be received until noon May 6 for \$743,000 4½ per cent. 30-year bonds as follows: Appropriation, \$123,000; water, \$75,000; Park Place Ward Improvement, \$45,000; refunding, to pay certificate of debt due Sept. 15, 1915, \$500,000. Address Finance Committee. R. E. Steed is City Clerk. Further particulars will be found in the advertising columns.

Va., Portsmouth.—Bids will be received until noon May 1 for \$250,000 4½ per cent. 20-year road purchase and improvement bonds of Norfolk county; denomination \$1000. Address Alva H. Martin, County Clerk. Further particulars will be found in the advertising columns.

Va., Gate City.—Scott county has issued \$30,000 road bonds. Address County Comms.

Va., Pulaski.—\$80,000 Newbern Magisterial Dist. road bonds were defeated.

W. Va., Fairmont.—City is considering question of issuing \$400,000 bridge bonds. Anthony Bowen is Mayor.

W. Va., Huntington.—Election is to be held in Cabell county May 22 to vote on \$600,000 30-year road bonds. D. I. Smith is Comms.

W. Va., Princeton.—The \$250,000 Mercer county road bonds to be voted on May 15 are 30-year 5 per cents. W. J. Lilly is Prest. County Court.

W. Va., Stealey Heights (P. O. Clarksburg). Election was held Apr. 21 to vote on \$30,000 6 per cent. street-improvement bonds. Address The Mayor.

W. Va., Welch.—Bids will be received until May 1 for \$165,000 5 per cent. 20-30-year road-improvement bonds Big Creek Dist., McDowell county; denomination not less than \$100 nor more than \$1000. R. K. Bragonier is Prest. County Court.

W. Va., Wheeling.—Election is to be held May 15 to vote on \$640,000 5 per cent. 30-year \$500 and \$1000 filtration bonds. Address The Mayor.

## FINANCIAL NOTES

The Oklahoma Bankers' Association will meet in annual convention at Tulsa, Okla., Thursday and Friday, May 13 and 14. W. H. Spaulding is Prest. and W. B. Harrison is Secy.

The State of Tennessee has obtained a loan of \$1,000,000 at 3 per cent. on short time notes from the National City Bank of New York, the paper being dated May 1, but maturing July 1 this year, and thus providing fund until the proceeds of the new bond issue will be available.

The annual convention of the Tennessee Bankers' Association will be held next Tuesday and Wednesday (Apr. 27 and 28) at Nashville. This will be the 25th yearly gathering of the organization. F. M. Mayerfield of Nashville is Secy. There are 600 banks in the State.

The Louisiana Bankers' Association, at its annual convention last week at the St. Charles Hotel, New Orleans, elected officers for the ensuing year thus: L. M. Pool of New Orleans, Prest.; J. W. Bolton of Alexandria, La., V.-P.; L. O. Broussard of Abbeville, La., Secy., and A. T. Kahn of Shreveport, La., Treas. J. H. Fulton of New Orleans is Chrmn. of the Executive Committee.

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OFFICERS.

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SUMMERFIELD BALDWIN, Vice-Pres.

H. VINTON LANSDALE, Cashier.

C. G. MORGAN, Asst. Cashier.

Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

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# Classified Opportunities

## MINERAL AND TIMBER LANDS WATER POWERS MISCELLANEOUS PROPERTIES

**HAVE YOU A VALUABLE PROPERTY FOR SALE?** Farm, timber land, mineral property or any other? We can help you get in touch with possible purchasers by an advertisement in these columns. For rates see head of this department.

**NEARLY 2000 acres, Horry Co., S. C.,** divided by the A. C. & L. R. R.; improved by store, 35 dwellings, sawmill, ginney and turpentine distillery, all outbuildings. Churches and schools convenient. Showing an income of nearly \$8000 per annum. Price \$100,000.

See me for large Southern acreage, also coal and timber land. Arthur M. Connor, Rooms 223 and 224 Oxford Bldg., Washington, D. C.

**5400 ACRES virgin hardwood timber land** in East Tennessee; price \$10 per acre. About 300-horse water-power, with 80 acres and improvements, on pike close to Birmingham, Alabama; price \$10,000. Farm Realty Co., 628 Jefferson Co. Bank Bldg., Birmingham, Ala.

### COAL LAND

**COAL RIGHTS FOR SALE.**—20,000 acres, Southern Illinois field, crossed by three railroads; near good markets; proven territory; high-grade coal; two veins; \$21 per acre. P. D. Armstrong, Alton, Ill.

**FOR SALE.**—Coal lands on railroad in Eastern Kentucky, 24,000 acres, but will divide in parcels to suit. Coals low in sulphur and ash and high in heating value. Address P. O. Box 35, Scranton, Pa.

### POLES AND PILING

**I FURNISH** chestnut poles any length, 20' to 75' oak piling any size. Locust post. Have a good stock of poles on hand at all times, and can make prompt shipments. When interested address E. L. Lewis, Relief, N. C.

### TIMBER FOR SALE

**REAL TIMBER BARGAIN.**—50,000,000 ft. 70% N. C. pine, poplar and cypress, all original growth; on Southern R. R. in South Carolina. Liberal terms and low price. J. P. Mulherin (owner), Augusta, Ga.

### TIMBER TRACTS WANTED

**WANTED—PINE TIMBER.**—Good yellow pine tracts cruising 5,000,000 to 50,000,000 feet. Send description and lowest price for cash to Lumberman, 14 Coosa St., Montgomery, Ala.

**WANTED—TIMBER TRACTS** to sell by men who are live wires in the business. Give full detail particulars what you have and address Lucas-Philip Co., P. O. Box 42, Oil City, Pa.

### TIMBER LAND FOR SALE

**4900 ACRES** timber land, 50 miles from Brunswick, Ga., 3 miles from A. C. L. R. R.; will cut 18,000,000 feet lumber, 180,000 turpentine boxes, 5000 piling, 100,000 cross-ties. Low price. G. H. Bowen, 458 W. Broad St., Savannah, Ga.

**FOR SALE.**—3000 acres, containing approximately 20,000,000 feet hardwood timber, \$10 per acre; 8 miles from railroad; best timber proposition in Virginia. Johnson's American and Foreign Real Estate Exchange, 926 Pa. Ave. N. W., Washington, D. C.

### FARM AND TIMBER LANDS

**ORIGINAL** and second-growth timbers in tracts containing from 500,000 to 50,000,000 feet, all situated on and near large trunk-line railroads. Prices right; terms liberal. Farm lands below bargain prices, containing from 25 to 5000 acres. Virginian-Seaboard Realty Company, Alberta, Va.

## ARKANSAS MAP AND INDEX

**LATEST ARKANSAS STATE MAP** and Guidebook, showing forest reserves; Homestead Laws (giving number of acres vacant in each county and which land district to write); elevations. Pocket size, 25c. County maps, 50c. F. L. Blaisdell, Bankers' Trust Bldg., Little Rock, Ark.

## FRUIT, FARM AND TRUCK LANDS

**THESE COLUMNS ARE CLOSELY READ BY PEOPLE** for information of all kinds about Southern properties of every description. If you have a property of any kind that you want to dispose of, try an advertisement in these columns. Others have to their advantage. For rates see head of department.

### ALABAMA

**GOOD INVESTMENT.**—We offer for sale 13,600 acres of best farm, fruit and stock-raising land in solid body, situated only a short distance from Bay Minette in Baldwin county, Alabama.

This land lies well, being level to slightly rolling, with several streams of running water through the tract, making it very desirable for colonization purposes.

This tract can be purchased for the low price of \$7 per acre. Will arrange terms. T. L. Moore & Co., Room 109 Masonic Temple, Mobile, Alabama.

## RATES AND CONDITIONS

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 25 lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 18c. per line; 300 lines, 16c. per line; 500 lines or more, 15c. per line.

### MISSISSIPPI

**IS HE CRAZY?** The owner of a plantation in Mississippi is giving away a few five-acre tracts. The only condition is that figs be planted. The owner wants enough figs raised to supply a canning factory. You can secure five acres and an interest in the factory by writing Eubank Farms Company, 601 Keystone, Pittsburgh, Pa. They will plant and care for your trees for \$6 per month. Your profit should be \$1000 per year. Some think this man is crazy for giving away such valuable land, but there may be method in his madness.

### NORTH CAROLINA

**SOUTHEASTERN NORTH CAROLINA.**—For Sale—2000 acres cut-over land, all in one body; best clay subsoil; classed high by Government soil survey for truck, clover or general farming. Well adapted for cutting up into small truck farms for colonists. A splendid proposition for a large stock farm. Write E. McN. Carr, Rose Hill, N. C.

**FOR SALE.**—1000 acres Martin county; 3,000,000 feet merchantable pine timber on same; on public road; good location; fine soil; no better in North Carolina; worth \$30 per acre; will take \$12.50 on ten years' time. Also, 1200 acres swamp land, 3,000,000 feet of gum timber in Washington county, \$5.50 per acre, 10 years' time. Washington-Beaufort Land Company, Washington, N. C.

### OKLAHOMA

**FOR SALE.**—120-acre farm, 5 miles from good town, on pike road; 75 acres cultivation; 50 acres fine creek bottom; will grow fine alfalfa; balance timber and pasture; house; barns; well and never-failing spring. Price, \$25 per acre, with terms. Leflore Co. Real Estate Co., Poteau, Oklahoma.

**FOR SALE.**—5000 acres, large and small tracts. Pittsburg county farming, pasture, oil and gas land. \$5 to \$25 per acre. Write J. E. CAVANAGH, McAlester, Okla.

### TEXAS

**1511 ACRES** good land for sale, in Clay county, Texas; small cash payment, balance on long time at low rate of interest. Address P. O. Box 524, Henrietta, Texas.

**22,000 ACRES** of land in one body, all under fence, well watered, with enough hardwood timber on the tract to pay for it; near railway; good roads. Price \$12.50 per acre. Wright-Kendall Co., Palestine, Tex.

### VIRGINIA

**RIVER FARM,** 282 acres, 100 of which are choice river low grounds, producing 75 to 100 bushels corn to the acre; 70 acres of timber (stumpage, worth \$1000). Good dwelling of 7 or 8 rooms, situated on knoll among fine grove of trees. Farm well fenced, cross-fenced and watered. Soil rich red and chocolate and finely adapted to grasses, grains and alfalfa. Plenty good outbuildings. Located 1½ miles from depot and close to schools and churches and in fine community. Being sold to close up an estate. A great bargain at \$6000. J. C. Woodson & Co., Lynchburg, Va.

**ESTABLISHED 1893.**—From long experience we are thoroughly familiar with lands and values and have some genuine bargains listed. Tell us what you want and let us submit some special offerings. Southern Farm Agency, Lynchburg, Virginia.

**VIRGINIA ESTATES.**—Colonial homes, plantations, farms, suburban homes, Albemarle pippin orchards, timber lands. Write us for what you want. We have it. R. N. Flanagan & Co., Charlottesville, Va.

## BUSINESS OPPORTUNITIES

**\$150 A WEEK.**—If you can't earn this selling our adjustable form units for building any size and shape of concrete culverts, we don't want you. Frick Mfg. Co., Fricks, Pa.

**FOR SALE.**—Hardware store, furniture and undertaking establishment, flour mill, farms and timber, factory sites, Md. and Penna. Write W. E. Anderson, White Hall, Md.

**FOR SALE.**—Gas plant, having \$600 per month income with fine margin of profit. Price \$20,000, and is clear of debt. Might take some or all of pay in clear land or income property. Address No. 1746, care Manufacturers Record, Balto., Md.

**FOR SALE.**—I know nothing of cotton-mill business, but purchased for \$29,000, at a receiver's sale, the Tarboro Cotton Factory, Tarboro, N. C., costing over \$300,000. I can offer great bargain for part interest to active operator, or entire plant. Henry Staton, 80 Broadway, New York.

**WE ARE CONSULTING ENGINEERS** backed by a competent staff and a modern machine plant that can save you money if you are interested in designing or building special machinery, special tools, experimental work, models, etc. If you have patented an article which is not perfected, a consultation with our expert mechanician is at your command. We are giving attention to developing patents and marketing patented articles, especially labor-saving appliances. Our list of office appliances is available. We invite correspondence and will give estimates promptly and cheerfully. Specialty Manufacturing-Sales Corp., Norfolk, Va.

**A DECIDED BARGAIN.**—Mill-planing mill-shook factory and flooring equipment on two railroads and a navigable river; about \$50,000 worth of lumber on sticks from \$10,000 to \$12,000 in bills receivable; several miles of R. R., locomotive and three skidders in a section where millions of timber can be purchased at 50c. to \$1 per thousand in North Carolina.

**Look Here!**—We have common stock in a 108,744-acre hardwood timber property in Louisiana on the Red River (navigable); two R. R. run through the land; cruisers report estimates 500,000,000 feet hickory, white oak; can sell hickory at Little Rock, Ark.; also, 2,500,000 standard white oak ties; will give 25 per cent. of stock for \$75,000 and control until money is paid back; money to be used as working capital.

We have valuable timber tracts in Tenn., Georgia, Arkansas, Louisiana and British Columbia. Lucas & Philip, P. O. Box 42, Oil City, Pa.

**WE HAVE FOR SALE** a controlling interest in a metal-manufacturing business established for 30 years; has always paid good profits. Capital stock of the company is \$300,000; rating is the highest credit in the Commercial Agency. Business in 1914 was about \$500,000. Reason for selling, owner of controlling interest is old and wishes to retire from active business. Business is located in Chicago. Full particulars, including public accountant's statement, furnished on application. C. Frank Taylor, 497 Fort Dearborn Bldg., Chicago, Ill.

**RELIABLE PARTY** offers absolutely safe real estate investment, guaranteeing 10 per cent. per annum profit on \$10,000 to \$25,000. Write for particulars. Johnson's American and Foreign Real Estate Exchange, 926 Pennsylvania Ave. N. W., Washington, D. C.

**FLORIDA ORANGE GROVE FOR \$90.**—Five minutes' walk from street car to Pensacola, a city of 30,000. 25 cents reserves a grove and brings full particulars with photo album of twenty colored views. Send today, as groves are limited. National Land Sales Company, Box 625, Pensacola, Fla.

**TO IRON FOUNDERS OR ENGINE BUILDERS:** Improvements in steam engineering specialties for sale or on royalty. Address No. 1748, care Manufacturers Record, Balto., Md.

**BUZZ WHEEL.**—Patent pending. A new toy which can be manufactured for less than a penny apiece. I would like to hear from some manufacturer who can handle this toy on a royalty basis. Correspondence solicited. W. J. Malter, Crowley, La.

**MECHANICAL ENGINEER** wants to connect with or form a new company to develop an invention needed on autos, trucks, agricultural machinery and 6 other lines of machinery. Address No. 1747, care Manufacturers Record, Balto., Md.

**OPPORTUNITY FOR INTERESTED PARTY.**—Patented Shock Binder. A small tool invaluable to Farmers. Highest testimonials from Agricultural Colleges, Experimental Stations and Practical Farmers. Will sell outright; sell on royalty or organize company. Address No. 1717, care Manufacturers Record, Balto., Md.

## INTEREST IN COAL-MINING COMPANY FOR SALE

**AN UNUSUAL OPPORTUNITY** to secure an interest in a splendidly equipped operation in the Pocahontas field, working the original No. 3 seam, 5 feet thick. The management is in the hands of the wealthiest and most successful operators in the field. Over \$400,000 has been spent on the improvements, and the works have never lost a day for want of orders. The large stockholders and directors represent a tonnage of several millions annually and a wealth of many millions of dollars.

Particulars as to the directors and stockholders will be furnished to bona-fide interested parties.

The unusual conditions prevailing for the past year compels the owner (a non-resident) to sacrifice the stock, which will be sold for \$50 per share, par value \$100, and it cost that. Terms easy; \$10 per share down and \$10 per share per month. Certificates in one-share lots or any number. Brokers protected. Address No. 1684, care Manufacturers Record, Balto., Md.



## COLLEGES AND SCHOOLS

**RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.**—Courses in Civil, Mechanical, Electrical and Chemical Engineering and General Science, leading to the degree of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), Chemical Engineer (Ch.E.), and Bachelor of Science (B.S.). Also special courses. Splendidly equipped new engineering laboratories. Send for catalogue to Registrar.

## WHERE TO SPEND THE SUMMER, MOUNTAIN—LAKE—SEASHORE

**A BEAUTIFUL SUMMER HOME FARM** in the White Mountain region of New Hampshire, 5 hours from Boston; 250 acres of forest and fields; enough white pine and other timber to return twice the cost of the place in a few years; situated on a slope commanding a beautiful valley and mountain view; no near neighbors, but accessible; 1 1/4 miles from village, 4 miles from R. R. station, 3 miles from New Hampshire "West side" or Connecticut Valley Boulevard; beautiful pine grove, small lake and fine stream on the property. Splendid chance for fish and game preserve. One and one-half story house, 10 rooms, wide piazza; running water from unfailing spring, very cold, very pure. Price and full particulars on request. E. Bertram Pike, Pike, N. H.

**LEICESTER, MASSACHUSETTS.**—For sale—1000 feet elevation, on State road, near park; modernized colonial house, lawn; beautiful views; lane back to cottage and 10 acres, orchards, fruits, woods in rear. Photos and particulars. \$12,000. Offer considered. Will divide if desired. Mrs. Denny.

## PATENT ATTORNEYS

**EUGENE C. BROWN, ENGINEER AND PATENT LAWYER**, Suite 40 Victor Building, Washington, D. C. Member Bar U. S. Supreme Court. Patents and Trademarks. Inventions are considered both from Engineering and Legal standpoints in my prosecution of patents. An experience of over 9 years as Examiner in U. S. Patent Office and over 6 years as Patent Expert in important patent suits are my special qualifications. Reports upon validity and infringement. Send sketch of invention for advice.

**VALUABLE INVENTIONS** justify only best legal service. Consult Vernon E. Hodges, Attorney-at-Law, Barrister Bldg., Washington, D. C. Practice before the U. S. Supreme Court; all Circuit Courts; Courts of the District of Columbia, and the U. S. and Foreign Patent Offices exclusively. Continuous practice since 1886. Extensive experience with all classes of invention, representing lawyers, manufacturers and inventors in every State.

**PATENTS THAT PROTECT AND PAY.** Advice and books free. Highest references. Best results. Promptness assured. Trade-marks registered. Watson E. Coleman, Patent Lawyer, 624 F St., Washington, D. C.

**PATENTS.**—Herbert Jenner, patent atty. and mechanical expert. 606 F St., Washington, D. C. I report free of charge if a patent can be had and its exact cost. Send for circular.

**"WORDS OF VALUE TO INVENTORS"** sent free; should be carefully read before applying for patents. John R. Woodworth, Registered Atty., Warder Bldg., Wash., D. C.

**MONEY IN PATENTS.**—I secure your patent or return my fee. Manufacturers want Mills patents. Write for free booklet, "How to Get Your Patent and Make Your Profits Thereon." I assist in selling your patent. Mansell F. Mills, Registered U. S. Patent Atty., 222 Com. Nat. Bank Bldg., Washington, D. C.

**PATENT YOUR IDEAS.**—\$9000 offered for certain inventions; book, "How to Obtain a Patent" and "What to Invent," sent free upon request; send rough sketch for free report as to patentability. We advertise your patent for sale at our expense. Chandler & Chandler, patent attorneys, 978 F St., Washington, D. C.

**C. L. PARKER, Patent Lawyer**, formerly member Examining Corps, U. S. Patent Office, 24 G St., Washington, D. C. Patents secured. Patent suits conducted. Reports on the patentability of inventions, the scope and validity of patents, and whether any process or machine infringes existing patents. Reference to prominent manufacturers and pamphlet of instruction furnished upon request.

**PATENTS** secured or Fee returned. Send sketch for free report as to patentability. Guide book and what to invent, with valuable list of inventions wanted, sent free; \$1,000,000 offered for inventions. Patents secured by us advertised free in World's Progress; sample free. Victor J. Evans & Co., 12 Ninth St., Washington, D. C.

## INDUSTRIES WANTED

## MISCELLANEOUS

**WEST POINT, VIRGINIA**, is the best unused location for a city in the United States, and its natural advantages will offset bonuses offered by other cities. Write Chamber of Commerce.

**LOCATE YOUR PLANT IN MARION, NORTH CAROLINA.** Complete railway facilities. Raw material. Cheap fuel. Good labor. Ideal climate. For further particulars address The Board of Trade, Marion, N. C.

## WAREHOUSE OR FACTORY BUILDING FOR SALE

**FOR LEASE**—Warehouse or factory building (on two R. R. tracks, capacity 12 cars). 30,000 feet floor space; electric elevator, two large boilers, one large Corliss engine, air compressor, well, heaters, etc.; 50,000 gallon steel tank; fine for mixed-feed plant, warehouse or general manufacturing purposes. Churchill & Co., Agents, 85 Madison, Memphis, Tenn.

## FACTORY SITES

**BALTIMORE FACTORY AND TERMINAL SITES.**—Statement of Asa G. Candier, President The Coca-Cola Co.: "Investigation convinced us that Baltimore is not only the commercial metropolis for Southern trade, but that it affords shipping opportunities both by water and rail for domestic and foreign traffic superior to any of the great cities in any section of the United States." Locate in Baltimore and derive these advantages. We can provide accommodations to meet your requirements. Wm. Martien & Co., 3 N. Calvert St., Baltimore, Md.

## INDUSTRIAL PLANTS FOR SALE

## FOUNDRY AND MACHINE SHOPS

**FOR SALE**—Dixie Foundry and Machine Work, corner Lee and Scott Sts.; splendid location for all kinds of repair work. Will sell at bargain. C. F. Umholtz, Bristol, Va.

## FURNITURE-INTERIOR TRIM PLANT

**FURNITURE, PANEL, INTERIOR TRIM PLANT.**—For quick sale, the best factory in the South for manufacture of panel, furniture or interior trim. Special advantages in rates, taxes, labor, raw material, both yellow pine and hardwoods. Plant is new, fireproof, and insurance rate is 66 cents per \$100. Sale price is less than half the cost. Write for particulars and photographs. J. P. Mulherin, Trustee, Augusta, Ga.

## BRICK PLANT

**MODERN BRICK MANUFACTURING PLANT.**—We have for sale a brand-new modern brick factory at Hot Springs, North Carolina, which cost in excess of \$15,000 and has hardly been used. Adjacent is an unlimited deposit of the finest brick-making shale we know of. The location of this plant provides minimum freight rates to an extensive market. The brick manufactured have taken the blue ribbon wherever exhibited. We will sell this plant at a considerable concession from its cost, and we are satisfied, as an opportunity for a brick manufacturer, that this plant and location cannot be beaten. Anson G. Betts & Company, Box 843, Asheville, N. C.

## OIL MILL

**OIL MILL FOR SALE.**—We offer at an attractive price our complete oil-mill property, consisting of all necessary brick buildings, abundant water supply, cheap fuel and excellent R. R. track. New machinery will have to be installed. Positively one of the best locations in Western Carolina. Enough local seed to run the season. Correspondence solicited. McCormick Oil Mill, F. C. Robinson, Secy. and Treas., McCormick, S. C.

## TURPENTINE-ROBIN PLANT

**WOOD DISTILLATION.** In Lake Charles, La. Wood cheap, abundant. Sell half or all. Exceptional opportunity. Particulars. M. P. Erwin, Lake Charles, La.

## ICE AND COLD STORAGE PLANT

**ICE AND COLD-STORAGE PLANT FOR SALE.**—In Baltimore, a plant suitable for manufacturing, cold storage or storage warehouse, equipped 60 H. P. engine, 3 boilers, 35-ton ice machine, 17 cold-storage closets; 25,000 ft. floor space; Penna. R. R. switch. Chas. E. Ecker, 1316 Munsey Bldg., Balto., Md.

## WOODWORKING PLANT

**FOR SALE.**—Small woodworking and planing outfit. It is situated at an excellent shipping point on land with buildings and power which can be leased for terms of years. Mrs. W. W. Branch, Charleston, W. Va.

## STONE CRUSHING PLANT

**COMPLETE STONE-CRUSHING PLANT,** located in Virginia, for sale. Large crusher, engines, boilers, bins, rails, and everything used in stone crushing. If interested, address P. O. Box 521, Roanoke, Va.

## MODELS

**MODELS MADE FOR INVENTORS.**—General machine work. Designing and perfecting. Developing automatic devices and machinery. In a position to do all kinds of light tool and machine work. Prices reasonable. Estimates cheerfully given. Ideal Machine Works, 64 Ann Street, New York City.

## MANTELS AND TILE FLOORS

**NORTHCROSS WOOD MANTELS AND TILE FLOORS** for every purpose. Sold direct from factory to your home. All orders receive prompt attention. Every contractor should have a copy of our new catalog showing the largest line in America. Mailed free. W. J. Northcross Mantel Company, 73 Union Ave., Memphis, Tennessee.

## MEN WANTED

**ARE YOU LOOKING FOR A GOOD MAN?** There are a number looking for you. You can get together through an advertisement in these columns. Try it. For rates and other information see block at head of department.

**IF YOU ARE LOOKING FOR A GOOD MAN,** an advertisement in these columns will fill your wants. Give it a trial and see how quickly you get together. For rates see block at head of department.

**SALESMEN** who are acquainted with large mill and factory owners, to sell a high-grade line of paints on commission basis. Attractive proposition to right parties in open territory. Address No. 1737, care Manufacturers Record, Balto., Md.

**WANTED**—Resident agent in Baltimore, Lynchburg, Richmond, Roanoke, Norfolk, Raleigh, Augusta, Wilmington, Charleston, Savannah, Atlanta and Jacksonville to represent glass bottle manufacturer; can be handled as side line; only men with selling ability need apply. Address No. 1738, care Manufacturers Record, Balto., Md.

**A MANUFACTURER** of a nationally-known power transmission requisite desires further representation in the South, especially in Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Northern Louisiana, Oklahoma and Missouri. The product is an absolute necessity in every mill, and it is simply a question of selling an article of reputation to customers in competition with other manufacturers. Address No. 1744, care Manufacturers Record, Balto., Md.

**WANTED**—A thoroughly capable millwork man who can read and apply plans and specifications, to take work from plans, make necessary details, and bill working orders into factory. The position is with a large concern and requires a man of experience and first-rate ability. Address P. O. Box 59, Manchester Station, Richmond, Va.

**IF QUALIFIED** for executive, technical, mechanical, professional or administrative position carrying salary between \$2500 and \$12,000, write undersigned counsel, through whom strictly confidential preliminaries will be negotiated for important appointments. Send address only for prefatory details. R. W. Bixby, Lock Box 134-J4, Buffalo.

## AGENCIES WANTED

**NEW YORK SALES AGENCY.**—A firm of highest moral and financial standing will accept for New York territory one or more responsible Southern accounts. W. Hoyt Weber & Co., 52 Vanderbilt Ave., New York.

**WANTED**—Sales agency for all lines pertaining to builders' specialties; East Tennessee as territory; can furnish satisfactory references to interested concern; modern warehouse facilities. Address Daniel Briscoe, Jr., 325-327 State St., Knoxville, Tenn.

## SITUATIONS WANTED

**POSITION DESIRED.**—Engineer, expert, long experience, utilization of fuels, oil, high and low grade coal, general power production, operation, design, valuation of any form of industrial work. As practical manufacturer, especially able to value purchases, all types of machinery, electrical, mechanical or chemical. Open to offer immediate acceptance. Address Engineer, Manufacturers Record, 1409 Fisher Bldg., Chicago, Ill.

**EXPERT SHIPPING CLERK,** etc., experienced with bonus and piece-work systems, cost, etc., open for position June 1; reference. No. 1735, care Manufacturers Record.

**PROPOSALS FOR SANITARY FIXTURES,** Range Boilers, Steel and Iron Castings, Stay-bolt Iron, Pig Iron, Bronze Bars, Bronze Wire Netting, Brass Tubing, Door Bolts, Hinges, Door Hooks, Shutter Knobs, Reamers, Files, Hoes, Cant-hook Handles, Magnesia Pipe Covering, Glue, Putty, Sal Soda, Coal Tar, Carbon Bisulphide, Copper Sulphate, Turpentine, Linseed Oil, Benzine, Alcohol, Muratic Acid, Japan Drier, Red Lead, White Lead, Lampblack, Paints, Varnish, and Yellow-pine Box-car Roofing and Siding. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 A. M. May 5, 1915, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 218) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1066 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala.; and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill.; and Commercial Club, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

**TREASURY DEPARTMENT,** Supervising Architect's Office, Washington, D. C., April 10, 1915. Sealed proposals will be opened in this office at 3 P. M. May 18, 1915, for the construction complete (including mechanical equipment, lighting fixtures and approaches) of the United States postoffice at Laurel, Miss. One-story and basement building; ground area, 7000 square feet; fire-proof throughout, except roof; stone facing below first-floor line, brick facing with stone base and stone and marble trimmings above first-floor line; tile and composition roof, with wood and copper cornice. Drawings and specifications may be obtained from the custodian of site at Laurel, Miss., or at this office, in the discretion of the Supervising Architect. O. WENDEROTH, Supervising Architect.

**TREASURY DEPARTMENT,** Bureau of Engraving and Printing, Washington, D. C., April 15, 1915. Sealed proposals will be received at this office until 2 P. M. Monday, May 3, 1915, to furnish during the fiscal year beginning July 1, 1915, Paper to be used in printing United States Internal Revenue and Postage Stamps. Awards will be made only to bona-fide manufacturers of paper. The right is reserved to reject any or all bids or parts of bids. Blank forms with specifications for proposals will be furnished intending bidders on application to JOSEPH E. RALPH, Director of Bureau of Engraving and Printing.

**POSITION DESIRED,** in connection with sales on large basis of cotton lint, by engineer and salesman in close touch with consumers in New York, Washington and South American markets; also for export abroad. Write, making proposition, salary and commission basis, moderate expense account. Address Cotton Lint, Manufacturers Record, 1409 Fisher Bldg., Chicago, Ill.

**SALESMAN,** age 31, 10 years' experience in general mechanical lines, structural, iron, steel, malleable castings, drop and hammered forgings, wants position in selling, buying or executive end of reliable company; will locate or travel anywhere. Address No. 1745, care Manufacturers Record, Balto., Md.

**SALES MANAGER** seeks position in the South; energetic correspondent with broad experience securing and handling men; thinker, planner, advertiser; positively a producer. 1739, care Manufacturers Record.

## LETTERHEADS, PRINTING, ETC.

**LITHOGRAPHED Letterheads:** at low cost—5000, \$2 per M; 10,000, \$1.75 per M; 25,000, \$1.40 per M. Nominal engraving charge on 1st order; quality guaranteed. Write for samples on your own letterhead. Monarch Lithographing Co. (Dept. E), Minneapolis, Minn.

**QUALITY STATIONERY** at moderate prices. 1000 good bond letterheads, printed to order, \$2. Sample booklet of attractive letterheads on request. Commercial Art Press, Box 356, Beaver Falls, Pa.

**\$1.50, 1000 Bond Letterheads;** 5M, \$6; Bill-heads and Statements, same price; 1000 6 1/2 XXX Envelopes, \$1.75. Send for samples. A. W. Beveridge & Co., Printers, 111 Mercer St., Baltimore, Md.

**1000 HAMMERMILL Bond Letterheads,** \$1.50; 5000, \$5. 1000 Envelopes, \$1.75. Bill-heads, Statements, Tags, etc. Samples free. S. I. Meseraull, 945 Central Ave., Dept. A, Kansas City, Kans.

## REBUILT TIME AND COST KEEPING RECORDERS

**TIME CLOCKS,** Dey and International bichrome machines, calculagraphs, cost-keeping recorders; everything in time clocks and supplies. R. G. Watkins, 9 Church St., N.Y. City.

## SECOND-HAND RAIL WANTED

**WANTED**—One and one-half to two miles of second-hand sixteen-pound rail for delivery at Hot Springs, North Carolina. A. G. Betts & Company, Box 843, Asheville, N. C.

## MACHINERY AND SUPPLIES

## GRANULATED CORK

**FOR SALE**—50 tons pure granulated cork, cheap. Apply New Orleans Cold Storage & Warehouse Co., Ltd., New Orleans, La.

## MACHINE, TOOLS, SHAFTING, ETC.

**FOR SALE**—Over 100 machines, bargain prices; lathes, presses, shears, forges, bolt machinery, automatics, shafting, pulleys, etc. Descriptive list. Prices and photos on request. Shelton Company, Shelton, Conn.

## EXCELSIOR MACHINES

**ALWAYS** market and highest prices for the long fiber dustless grades of excelsior made with the late improved machines manufactured by W. S. Minor, Northville, N. Y.

## PROPOSALS

**PROPOSALS FOR SANITARY FIXTURES,** Range Boilers, Steel and Iron Castings, Stay-bolt Iron, Pig Iron, Bronze Bars, Bronze Wire Netting, Brass Tubing, Door Bolts, Hinges, Door Hooks, Shutter Knobs, Reamers, Files, Hoes, Cant-hook Handles, Magnesia Pipe Covering, Glue, Putty, Sal Soda, Coal Tar, Carbon Bisulphide, Copper Sulphate, Turpentine, Linseed Oil, Benzine, Alcohol, Muratic Acid, Japan Drier, Red Lead, White Lead, Lampblack, Paints, Varnish, and Yellow-pine Box-car Roofing and Siding. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10.30 A. M. May 5, 1915, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 218) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1066 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala.; and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill.; and Commercial Club, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

**TREASURY DEPARTMENT,** Supervising Architect's Office, Washington, D. C., April 10, 1915. Sealed proposals will be opened in this office at 3 P. M. May 18, 1915, for the construction complete (including mechanical equipment, lighting fixtures and approaches) of the United States postoffice at Laurel, Miss. One-story and basement building; ground area, 7000 square feet; fire-proof throughout, except roof; stone facing below first-floor line, brick facing with stone base and stone and marble trimmings above first-floor line; tile and composition roof, with wood and copper cornice. Drawings and specifications may be obtained from the custodian of site at Laurel, Miss., or at this office, in the discretion of the Supervising Architect. O. WENDEROTH, Supervising Architect.

**TREASURY DEPARTMENT,** Bureau of Engraving and Printing, Washington, D. C., April 15, 1915. Sealed proposals will be received at this office until 2 P. M. Monday, May 3, 1915, to furnish during the fiscal year beginning July 1, 1915, Paper to be used in printing United States Internal Revenue and Postage Stamps. Awards will be made only to bona-fide manufacturers of paper. The right is reserved to reject any or all bids or parts of bids. Blank forms with specifications for proposals will be furnished intending bidders on application to JOSEPH E. RALPH, Director of Bureau of Engraving and Printing.

[CONTINUED ON NEXT PAGE.]



# PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

**DEPARTMENT OF THE INTERIOR,**  
Washington, D. C., April 19, 1915. Sealed proposals in duplicate will be received at this Department until 2 o'clock P. M. Tuesday, May 11, 1915, and then opened, for the furnishing of all labor and material (unless otherwise specified) which shall be required for rewiring the third floor and galleries of the Patent Office Building, Seventh and F streets N. W., Washington, D. C., and making all connections ready for service, in accordance with plans and specifications, copies of which may be obtained upon application to the chief clerk of the department. Proposals should be securely enveloped, marked "Proposal for rewiring third floor and galleries, Patent Office Building," and be addressed to the Secretary of the Interior. BO SWEENEY, Assistant Secretary.

## \$16,000 Road Bonds

Jackson, N. C.  
Sealed bids will be received until 10 o'clock A. M. May 18, 1915, for \$16,000 Jackson Township Road Bonds. Address: G. A. MOORE, Secy. Board of Road Commissioners, Jackson, N. C.

## \$7500 5% Bonds

Lockney, Tex.  
Bids will be received up to 5 P. M. May 10, 1915, for the sale of \$7500 Lockney Ind. School Dist. Bonds. Bonds run 40 years, 5 per cent., optional after 10 years. \$100 certified check must accompany each bid. Wm. McGhee, Pres. School Board.

## \$16,500 6% Bonds

Barbourville, Ky.  
\$16,500 of Barbourville Graded High School Bonds, 6 per cent. interest paid semi-annually, 10 to 30 years. Bids opened 1 P. M. May 1, 1915. Certified check for 2 per cent. to accompany bid. Returned if rejected. W. C. BLACK, M.D., Chairman.

## \$15,000 6% Bonds

Carthage, Tenn.  
On May 1, 1915, at twelve o'clock M., we will sell to the highest bidder \$15,000 of Carthage, Tennessee, six per cent. twenty-five-year High School Bonds, interest payable semi-annually. Sealed bids. Certified check for five per cent. of bid must accompany same. Address: ALEX. C. READ, Mayor.

## \$15,000 5% Bonds

Alma, Ga.  
The Town of Alma, Bacon County, Georgia, will receive open bids until noon May 4 for \$15,000 of thirty-year 5 per cent. Water Bonds, interest payable annually. Town reserves the right to reject any or all bids. All bids must be accompanied with certified check for \$500.

## \$100,000 5% Bonds

WAKE COUNTY, NORTH CAROLINA, FUNDING BONDS.

Raleigh, N. C.  
Sealed proposals will be received and opened by the Board of Commissioners of the County of Wake, North Carolina, at their office in Raleigh, N. C., at 12 o'clock M. on the 3d day of May, 1915, for the purchase of one hundred five per cent. 30-year Coupon Bonds, interest payable semi-annually on the first days of May and November, in the denomination of one thousand dollars (\$1000) each.  
Each bid must be accompanied by a certified check for \$2500 and addressed to the undersigned, Chairman of the Board of County Commissioners.  
The right to reject any and all bids is hereby reserved.

JOHN A. MILLS,  
Chairman Board of Commissioners  
for Wake County, N. C.  
B. C. BECKWITH, County Atty,  
Raleigh, N. C.

## \$15,000 6% Bonds

Lumberton, N. C.  
Sealed bids will be received by the Board of Drainage Commissioners of the Back Swamp and Jacob Swamp Drainage District at the Courthouse in the town of Lumberton, up to 12 o'clock noon Monday, May 3, 1915, for the purchase of fifteen thousand dollars emergency bonds of said district, said bonds being in denominations of five hundred dollars each and bearing interest at six per cent. per annum, payable semi-annually, principal of said bonds to be payable on August 1, 1925. The bonds will be dated August 1, 1915.  
The issuance of said bonds was authorized by the General Assembly of North Carolina, Session 1915, and was necessary on account of an error in dating the 1915 series of the one hundred and fifty thousand dollars bond issue heretofore sold. The act provides that the bonds must bring par, and no bid below par can be considered.

G. B. SELLARS,  
Chairman of the Board of  
Drainage Commissioners.

## \$75,000 4½% Bonds

Lancaster, S. C.  
The County Commissioners of Lancaster County, South Carolina, invite sealed bids for the purchase of \$75,000 20-year coupon bonds of said county, bearing interest at the rate of 4½ per cent., payable semi-annually, January and July. Bids will be received at the office of the County Commissioners at Lancaster, South Carolina, up to the 28th day of April, 1915, and must be accompanied by a certified check for \$250 as evidence of good faith. The right to reject any and all bids is reserved. For further information address T. Y. Williams, Clerk.

## \$565,000 Collin County (Texas) Road Bonds

McKinney, Tex., April 17, 1915.  
Sealed proposals will be received and opened at noon June 6, 1915, for all or any part of the \$565,000 bonds by the Commissioners' Court of Collin County or J. L. Franklin, County Auditor, McKinney, Texas. Certified check for 2 per cent. of bid must accompany same. Printed circulars containing definite and detailed information will be furnished on application.  
J. L. FRANKLIN, County Auditor.

## \$55,000 5% Bonds

Maryville, Tenn.  
Sealed bids for fifty-five thousand dollars (\$55,000) of the bonds of Maryville, issued to raise funds for constructing water-works, will be received at the office of the Recorder, to be opened at noon on Monday, May 10, 1915.

The bonds will mature on January 1, 1945, bearing interest at the rate of five per cent. (5%) per annum, payable semi-annually on January 1 and July 1, the first installment of interest to begin from the date of the completion of sale, principal and interest payable at the Chemical National Bank of New York City.

Each bid must be accompanied with a certified check for one thousand dollars (\$1000) as a surety for the compliance with the bid, if accepted.  
The bonds cannot be sold for less than their face value, and the Board of Mayor and Aldermen reserves the right to reject any or all bids.

This April 10, 1915.  
SAM EVERETT, Mayor.  
WILL A. McTEER, Recorder.

## \$200,000 5% Bonds

Tulsa, Okla.  
Tulsa County, Oklahoma, will on the 4th day of May, 1915, at 2 P. M., at the County Clerk's office in the City of Tulsa, offer for sale County Bridge Bonds in the sum of \$200,000, dated April 12, 1915; maturing, \$50,000, April 21, 1920; \$50,000, April 12, 1925; \$50,000, April 12, 1930, and \$50,000, April 12, 1935; bearing interest at the rate of 5 per cent. per annum, payable semi-annually, the first coupon covering twelve (12) months' interest. Reserving the right to retain \$50,000 of said bonds, or any portion thereof, the proceeds from the sale of which may be deemed not necessary to complete the contemplated bridge construction. Said bonds to be accepted by the successful bidder, as to their legality, upon the approval of the State Bond Commissioners of Oklahoma.

Certified check in the sum of \$5000 on some bank in the State of Oklahoma as a guarantee of faithful performance, must accompany each bid. The right is reserved to reject any or all bids.

LEWIS CLINE,  
County Clerk, Tulsa, Okla.

## \$134,000 4% Bonds

Dayton, Ky.  
Pursuant to instructions given in a resolution adopted by the Board of Council of the City of Dayton, Campbell County, Kentucky, at a regular meeting of said Board held March 15, 1915, the undersigned Bond Commissioners of said City of Dayton will receive "sealed bids" for the sale of two hundred and sixty-eight (268) bonds of five hundred dollars (\$500) each, bearing interest at the rate of four (4) per cent., payable semi-annually. The said bonds shall be payable in twenty (20) years from date of August 1, 1915; provided, however, the City of Dayton reserves the right to redeem so many of said bonds in their numerical order as may be provided for in a sinking fund, to be created by the said Board of Council for said purpose.  
All bids shall be presented to said Bond Commissioners on or before eight (8) o'clock P. M. the seventeenth (17th) day of May, 1915, where same will be opened and read in open session of Council.

The money derived from the sale of said bonds shall be set aside and used exclusively for the purpose of paying an indebtedness of said City of Dayton incurred by the issue and sale of bonds amounting to one hundred and thirty-four thousand (\$134,000) dollars, dated August 1, 1895. All information relative to the issue and sale of said bonds can be had by calling at the office of the City Clerk of said City of Dayton, Kentucky.

The Board of Council reserves the right to reject any or all bids.  
W. C. QUINBY, Mayor;  
WILL C. MARTIN, City Clerk;  
FRED H. REEKERS, City Treasurer,  
Bond Commissioners.

## \$743,000 City of Norfolk, Va.

THIRTY-FOUR AND ONE-HALF PER CENT.  
(4½%) BONDS OF \$1000 EACH,  
\$743,000 DATED MAY 1, 1915,  
INTEREST PAYABLE NOVEMBER 1 AND MAY 1.  
\$500,000 DATED JUNE 1, 1915,  
INTEREST PAYABLE DECEMBER 1 AND JUNE 1.

Sealed proposals will be received at the office of the City Treasurer of Norfolk, Va., until 12 o'clock M. Thursday, May 6, 1915, for \$743,000 four and one-half per cent. (4½ per cent.) thirty (30) year coupon bonds, issued for the following purposes:  
Water bonds.....\$123,000.00  
Park Place Ward Improvement Bonds.....45,000.00  
Refunding bonds to pay certificate of debt due September 15, 1915.....500,000.00  
Total.....\$743,000.00

Bids may be for the whole or part of the said bonds, and must state price and accrued interest.

Bonds issued in denominations of \$1000. Bonds and interest payable in Norfolk. All bonds to be issued as coupon bonds, but purchasers to have privilege of having same registered.

Bids must be marked "Proposals for Bonds."  
Bidders to enclose check for one per cent. (1 per cent.) of the par value of the amount bid for. Immediately upon notification of allotment a further deposit of 4 per cent. (four per cent.) of par value of amount allotted shall be made.

Four and one-half per cent. (4½ per cent.) interest will be allowed successful bidders on the five per cent. (5 per cent.) paid in from time of receipt of the four per cent. (4 per cent.) until bonds are ready to be delivered.

It is proposed to deliver \$243,000 of bonds to purchasers as of the date of sale, but if for any reason delivery should be delayed beyond that date the purchaser will be required to pay accrued interest to the time of delivery. The remainder of the purchase money to be paid immediately after the purchasers are notified that bonds are ready for delivery.

The \$500,000 refunding bonds to be delivered and paid for at option of buyer at any time not later than September 1, 1915, with accrued interest, if any.

The bonds shall be delivered and paid for in the City of Norfolk.

Checks to be drawn on some State or national bank, certified and made payable to order of R. Gray Tunstall, City Treasurer of the City of Norfolk, Va.

Circulars containing full information will be forwarded upon request by R. E. Steed, City Clerk.

The right is reserved to reject any or all bids, and also (unless otherwise expressly stated in the bid) to allot any portion of the amount of bonds bid for.

The validity of the bonds will be approved by Messrs. Hawkins, Delafield & Longfellow, attorneys, of New York City, whose opinion will be furnished to the purchaser by the city.

THE FINANCE COMMITTEE,  
W. T. HAM, Chairman,  
From the Common Council.  
NATHAN METZGER, Chairman,  
From the Board of Aldermen.  
Teste: R. E. STEED, City Clerk.

## Sale of \$250,000 Road Purchase and Improvement Bonds by Norfolk County

Portsmouth, Va.  
Pursuant to the provisions of an Act of the General Assembly of Virginia, approved February 1, 1915, the Board of Supervisors of Norfolk County will, on the 1st day of May, 1915, at 12 o'clock M., at the County Clerk's office of said county, receive sealed proposals for the purchase of \$250,000 of bonds, to be known as "Road Purchase and Improvement Bonds," said bonds to be either registered or coupon, and to be in denominations of \$1000 each, payable twenty years after date, and to bear interest at the rate of four and one-half per centum per annum, payable semi-annually at the office of the Treasurer of said county, and to be exempt from county taxation. These bonds are to be secured by a deed of trust conveying the interest of said county in the Norfolk County Ferries; and a fund is to be set aside annually out of the county's share of the net receipts from the Norfolk County Ferries equal to the interest on said bonds and five per centum of the principal, which fund shall be used for the purpose of paying the interest on said bonds so issued, as it accrues, according to the tenor thereof, and for the further purpose of creating a sinking fund to satisfy the principal thereof at maturity. The Board of Supervisors is also authorized to apply any part or all of said sinking fund to the payment or purchase of any of said bonds at any time, and all bonds so paid off or purchased shall be immediately cancelled, and shall not be reissued.

The Board of Supervisors is also authorized, by an Act of said General Assembly, approved February 11, 1915, to guarantee the payment of any bonds issued in accordance with the provisions of the first-mentioned Act.

ALVAH H. MARTIN,  
County Clerk.

## \$100,000 5% Bonds

Greenville, S. C.  
Sealed bids at not less than par will be received by the undersigned until noon May 10, 1915, when they will be opened, for the purchase of one hundred thousand (\$100,000) dollars coupon bonds, to be dated July 1, 1915, and to mature July 1, 1945, without option of prior payments; bonds to be in the denomination of one thousand (\$1000) dollars each, and to bear interest at not exceeding five (5%) per cent. per annum, payable semi-annually; both principal and interest payable at some responsible bank in the city of New York; sixty thousand (\$60,000) dollars of said bonds to be used for the purpose of erecting or repairing Courthouse; thirty thousand (\$30,000) dollars for the purpose of erecting or repairing Jail; ten thousand (\$10,000) dollars for the refunding of Air Line Railway aid bonds. The approving opinion of Storey, Thorndyke, Palmer & Dodge of Boston as to the legality of said bonds will be furnished. All bids must be accompanied by a certified check, with no conditions endorsed on same, except the legality and regularity of said issue, payable to the order of the undersigned, in the sum of twenty-five hundred (\$2500) dollars, and drawn on some bank in Greenville, S. C., as a guarantee that the purchaser will take up and pay for the bonds as soon as same are signed and ready for delivery, and in case the purchaser should fail to pay for said bonds within ten (10) days after they are ready for delivery, the required deposit will be forfeited to the county. The right is reserved to reject any or all bids.

W. H. WILLIMON,  
Supervisor, Greenville County, S. C.  
April 10, 1915.

## Notice of Construction of Seven Bridges in Randolph County, West Virginia.

Elkins, W. Va.  
The County Court of Randolph County will receive sealed bids till 10 o'clock A. M. Tuesday, May 4, 1915, for the construction of the following bridges:  
MILL CREEK BRIDGE, on Huttonsville and Helvetia Pike at Rosencranes' Mill, near the town of Mill Creek.

BRIDGE NEAR LABAN CURRENCE'S RESIDENCE, on the Staunton and Parkersburg Turnpike.

STONE GUTTER BRIDGE, on the Staunton and Parkersburg Turnpike.

KINGS RUN BRIDGE, on the Beverly and Fairmont Turnpike.

ISNERS RUN BRIDGE, on the Beverly and Fairmont Turnpike.

STALNAKERS RUN BRIDGE, on the Buffalo Turnpike.

STONE HOUSE BRIDGE, across Cheat River, near the Storey House.

The plans and specifications for said Bridges are upon file in the office of the Clerk of the County Court of said county, at Elkins, West Virginia, and at the office of the State Road Bureau, at Morgantown, West Virginia. Copies of said plans and specifications may be obtained by bidders from the State Road Bureau of Morgantown, W. Va., by paying the small cost of furnishing paper and having the blueprinting done.

Said Bridges will be constructed according to said plans and specifications or according to alternative plans and specifications, which may be filed by bidders, and the Court may determine which plan they accept.

The Court reserves the right to reject any or all bids.

By order of the Court.  
THADDEUS PRITT, Clerk.

## State Highway Repairing Timber Bridge

STATE OF MARYLAND.  
STATE ROADS COMMISSION.  
NOTICE TO CONTRACTORS.  
Sealed proposals for building one section of State Highway, as follows:  
Contract No. Ch-6-CHARLES COUNTY: One section of road from Bel Alton to Lothair, about 1.91 miles in length (4" rolled gravel).

For repairing the timber bridge over the Severn River on the Annapolis Boulevard near Annapolis, the material required to be about 5000 feet of 12"x12" timber and 8000 linear feet of timber piles. Contract No. 027018.

Will be received by the State Roads Commission at its offices, 601 Garrett Building, Baltimore, Maryland, until 12 M. on the 27th day of April, 1915, at which time and place they will be publicly opened and read.

Bids must be made upon the blank form contained in the book of specifications. Specifications and plans will be furnished by the Commission upon application and cash payment of \$1, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of five hundred (\$500) dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

By order of the State Roads Commission this 19th day of April, 1915.

O. E. WELLER,  
Chairman.  
WM. L. MARCY,  
Secretary.



**Steel Bridge**

Natchitoches, La.  
Bids will be received until May 3, 1915, for steel bridge to be erected over Cane River about nine miles below Natchitoches, La.  
Contractor to furnish all labor and material. Bids will be opened 10 A. M. May 3, 1915.  
Committee reserves right to reject any or all bids. Address G. H. Pierson, President Police Jury, Natchitoches, La., or W. F. Cooper, Engineer, for plans and specifications.

**Concrete Bridge**

Cumberland, Md.  
Bids will be received by the Mayor and City Council of Cumberland, Md., up to 9:30 o'clock A. M. May 5, 1915, for the construction of a concrete twin arch bridge at Market street over Willis Creek, clear span of each 65 feet.  
Plans and specifications can be procured at the office of City Engineer, City Hall, on deposit of ten dollars (\$10), to be refunded if same be returned in good condition.  
The right is reserved to reject any and all bids if not satisfactory to the Mayor and City Council.

JAMES P. GAFFNEY,  
City Engineer.

**Steel Highway Bridge**

Hamlin, W. Va.  
Bids will be received by the Lincoln County Court at Hamlin, W. Va., until 1 o'clock P. M. Monday, May 3, 1915, for steel highway bridge at town of Ranger of G. V. R. R. over Guyandotte River, consisting of 1 82-foot span, 1 192-foot span and 1 42-foot span, with 16-foot roadway.  
600 cu. yds. concrete masonry (approximately).  
A certified check in the sum of \$500 with all superstructure bids and \$250 with all substructure bids will be required.  
Plans and specifications can be obtained from the undersigned engineers for the sum of \$2.  
The right is reserved to reject any or all bids.

A. C. PARSONS, President.  
L. B. HILL, Commissioner.  
R. B. THORNTON, Commissioner.  
OLIVER & MAUPIN, Consulting Engrs.,  
Huntington, W. Va.

**Steel Bridge and Concrete Work**

Hamlin, W. Va.  
Sealed bids will be received until 2 o'clock P. M. May 3, 1915, by the Commissioners of the Lincoln County Court of Lincoln County, W. Va., at Hamlin, W. Va., the county seat of said county, and at the County Clerk's office, for the construction of a steel bridge across Guyandotte River and the concrete work for same.

For plans and specifications address Oliver & Maupin, Engineers, Huntington, W. Va.  
The said Commissioners reserve the right to reject any and all bids.  
A. C. PARSONS, President.  
By ALBERT F. BLACK,  
Clerk Lincoln County Court.

**Highways**

Lake Charles, La.  
Sealed bids will be received by the Police Jury at the office of the Highway Department, Lake Charles, La., up to 11 A. M. May 4, 1915, for the construction of Highways 6, 8, 10, 14 and 16. Approximately 43 miles of grading. A deposit of \$5 is required for copies of plans and specifications. The right is reserved to reject any or all bids. E. C. House, Clerk to the Police Jury. Fred Shuts, Parish Engineer.

**Paving**

Baton Rouge, La., April 16, 1915.  
Sealed bids will be received by the Commission Council of Baton Rouge, La., up to 12 o'clock Monday, May 15, 1915, for laying approximately 170,000 sq. yds. Bituminous Gravel Pavement with concrete curb and gutter, sub-surface drainage, etc.  
Also, approximately 22,000 sq. yds. hard-surface pavement on concrete base.  
A certified check of \$5000 (five thousand dollars) must accompany each bid on the gravel pavement, and a certified check for \$1000 (one thousand dollars) must accompany bids on the hard-surface pavement.  
Specifications and blank form of proposal may be obtained on application.  
The city reserves the right to reject any or all bids.

JOHN J. MUNDINGER,  
City Engineer.

**Gravel Roads**

Alexandria, La.  
Sealed proposals will be received by the undersigned at the Courthouse in the City of Alexandria, Louisiana, up to 12 noon Monday, May 3, 1915, for the construction of approximately 25 miles of gravel road in Road District No. 2 of Rapides Parish, Louisiana, according to plans and specifications on file with the Clerk of the Police Jury.  
Information as to location, character of work, material required, terms of payment, regulations governing manner of submitting proposals and executing contract may be obtained of Ira W. Sylvester, Engineer, Alexandria, Louisiana.  
The right to reject any and all bids is specifically reserved.

J. P. TURREGANO,  
S. W. HARRIS,  
SAML. WARSHAUER,  
Committee, Road Dist. Number Two.  
IRA W. SYLVESTER,  
Engineer.

**Highway**

McKinney, Texas, April 17, 1915.  
Sealed proposals will be received by the Commissioners' Court of Collin County, Texas, for the construction of about 125 miles of public highway, viz., in Road District No. 4 about 70 miles, in Road District No. 8 about 40 miles, and in Road District No. 9 about 20 miles, on or before noon June 7, 1915.  
Bids to be on the unit basis for the construction of macadam, gravel, and concrete roads. Certified checks of \$5000 on Road Dist. No. 4, \$3000 on Road Dist. No. 8, and \$2000 on Road Dist. No. 9.  
For plans and specifications write John Mead, County Engineer of McKinney, Texas.

**Highway Work**

THE FIRST SUPERVISORS' DISTRICT,  
OKTIBBEHA COUNTY, MISS.

Starkville, Miss.  
Sealed bids will be received until 2 o'clock Saturday, May 1, 1915, by the Chancery Clerk of Oktibbeha County, at Starkville, Miss., for the construction of highways in this district. Plans and specifications now on file in the office of the Chancery Clerk of said county. Copies of these plans and specifications, together with bid proposal blanks, may be obtained from E. C. Thomas, engineer for the Commission, office in Nash Building, Starkville, Miss.  
The work includes the excavation of approximately 30,000 cubic yards of earth, 9000 cubic yards of rock, the furnishing of approximately 50,000 tons of Novaculite, in two courses, and the placing of about 170,000 square yards of Novaculite, the laying of 100 yards of plain concrete, 150 yards reinforced concrete, and approximately 200 feet of pipe. Contractor to furnish all materials.  
The contractor will be required to dispose of 5/8 per cent. road bonds of this district equal to the amount of his bid, plus 10 per cent. of that amount. A certified check is required as guarantee of good faith of amount equal to 5 per cent. of his bid. This check to be made payable to J. W. Eckford, Secretary of Board of Commissioners.  
The Board reserves the right to reject any and all bids.

E. C. THOMAS, Engineer.

**Highway**

Frederick, Md.  
Sealed proposals, addressed to the County Commissioners of Frederick County, and endorsed "Proposals for building a section of State-aid highway in Frederick county," upon or along the road from the State Road at the finger board to Hyattstown, the road between the finger board and Pleasant Grove Schoolhouse, for a distance of about 1 1/2 miles, will be received by the County Commissioners of Frederick County at their office in Frederick, Md., until 12 o'clock noon of the 11th day of May, 1915, and at that time and place will be publicly opened and read. All bids must be made upon blank forms to be obtained of the State Roads Commission at its office, 534 N. Howard St., Baltimore, Md.; must give the prices proposed both in writing and in figures, and must be signed by the bidder, with his address. Each bid is to be accompanied by a certified check for two hundred dollars (\$200), payable to the County Commissioners of Frederick County, said check to be returned to the bidder unless he fails to execute the contract should it be awarded to him. Plans can be seen and forms of specifications and contract may be obtained upon the cash payment of one dollar (\$1) at the office of the State Roads Commission, Baltimore, Md. The County Commissioners of Frederick County reserve the right to reject any and all proposals.  
By order of County Commissioners.  
JOHN W. HOLTER, Pres.  
H. L. GAVER, Clerk.

**State Highway**

STATE OF MARYLAND.  
STATE ROADS COMMISSION,  
601 Garrett Building,  
Baltimore, Md.

**NOTICE TO CONTRACTORS.**

Sealed proposals for building State Highway aggregating 2.36 miles in length and one fill as follows:  
Contract No. BC-12—BALTIMORE CITY: One section of Park Heights Avenue from Pimlico Circle to the City Limits, about 1.13 miles in length. (Sheet Asphalt, Brick Gutters.)  
Contract No. BC-17, Sec. 9: Fill for North Approach to Hanover Street Bridge, about 23,000 cubic yards of Excavation.  
Contract No. C-64 A—CECIL COUNTY: One section of road through Chesapeake City, about 4 miles in length. (Concrete.)  
Contract No. Q-11—QUEEN ANNE'S COUNTY: One section of road through Centerville, about .53 miles in length. (Concrete or Amiesite.)

Will be received by the State Roads Commission at its office, 601 Garrett Building, Baltimore, Md., until 12 M. on the 27th day of April, 1915, at which time and place they will be publicly opened and read.

Bids must be made upon the blank form contained in the book of specifications. Specifications and plans will be furnished by the Commission upon application and cash payment of \$1 for each contract, as hereafter no charges will be permitted.

No bid will be received unless accompanied by a certified check for the sum of five hundred (\$500) dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.  
By order of the State Roads Commission, this 13th day of April, 1915.

O. E. WELLER, Chairman.  
WM. L. MARCY, Secretary.

**Sea Wall, Sewerage Extensions and Street Paving**

West Palm Beach, Florida.

Sealed proposals will be received by the City Council of West Palm Beach, Florida, at the office of the City Clerk, for the construction of a seawall, improvements to sanitary sewerage system and additional street paving, until May 7, at 12 o'clock noon, 1915, at which time they will be opened and read publicly. The work includes the furnishing of all labor, material and machinery, and equipment of every kind necessary to construct the above improvements according to plans and specifications. The approximate quantities are as follows:

Seawall.  
1,350 Cubic yards of Reinforced Concrete.  
73.44 Tons of Steel Reinforcement.  
11,460 Pounds of Anchor Rods, Bolts, Nuts and Washers.  
5,720 Linear feet of 10" Round Pile.  
99,423 Cubic yards of Fill.  
2,415 Square yards of Sidewalk.  
Sanitary Sewers.  
16,660 Feet 8", average depth 4.6".  
3,390 Feet 10", average depth 4.5".  
1,315 Feet 12", average depth 4".  
43 Manholes.  
13 Automatic Flush Tanks.  
5 Lampholes.  
Necessary Y Branches.

Street Paving.  
40,000 Square yards Macadam Pavement.  
29,900 Square yards Rock Surfacing.  
5,544 Cubic yards Grading.

Each bid must be accompanied by a certified check on any State or National Bank of Florida, or on a National Bank of any other State, for 5 per cent. of the amount bid, drawn to the order of the President of the Council, Mr. L. T. Lockwood.  
The bonds have been sold and payments for work will be made in cash. The successful bidder must be prepared to commence work within fifteen days from date of acceptance of this bid.

It is the desire of the City Council to let the contract as a whole to one contractor, but they reserve the right to segregate and let in sections if it be to the best interests of the city.

Plans and specifications may be seen at the office of the President of the Council or the Engineers. Bidding blanks may be obtained from the Engineers. Copies of plans and specifications may be obtained from the Engineer at \$5 per set to cover their actual cost.

The right is reserved to reject any or all bids.

L. T. LOCKWOOD,  
President of Council.  
A. M. LOPEZ,  
City Clerk.

THE J. B. McCRARY COMPANY,  
Engineers,  
1408-17 Third National Bank Bldg.,  
Atlanta, Ga.

**Sanitary Sewer System**

Siloam Springs, Ark.

Sealed proposals will be received at the office of H. J. Alfrey, Secretary Board of Improvement, Sewer District No. 1, Siloam Springs, Ark., up to 2:30 o'clock P. M. May 12, 1915, for furnishing all materials and labor in the construction of a sanitary sewer system, as follows:

For furnishing and laying 3000 ft. of 15" sewer pipe, 4100 ft. 12", 5500 ft. 10", 26,900 ft. 8" and 16,800 ft. 6"; 900 6" on 8" Y's and 500 6" on 6" Y's; 300 ft. of 10"-6" cast-iron pipe; for excavating 17,800 ft. of trench, 0 to 4' deep; 23,100 ft. 4' to 6"; 7500 ft. 6' to 8"; 1800 ft. 8' to 10"; 200 ft. 10' to 12"; 200 ft. 12' to 14"; and 100 ft. 14' to 16"; for building 136 manholes; 120 ft. additional depth of manholes; 12 flush tanks; 40 lampholes; for placing 25 cu. yds. extra concrete; for excavating 3000 cu. yds. rock in trench; 500 cu. yds. earth at disposal plant, and 600 cu. yds. rock at disposal plant, and for building disposal plant.

Plans and specifications are on file at the offices of the Secretary and Engineers. All proposals to be made on the regular forms furnished by the Engineers. Copies of plans and specifications can be obtained from the Engineers by remitting \$5.

Certified check for \$5000 to accompany proposal.  
The Board of Improvement reserves the usual rights in considering the bids.

O. P. MAXWELL, Chairman;  
R. J. ALFREY, Secretary;  
W. H. CURTIS.

Board of Improvement, Sewer District  
No. 1, Siloam Springs, Ark.  
WINTERS & DOVE, Engineers,  
311-312 Merchants' Nat. Bank Bldg.,  
Fort Smith, Ark.

**Sanitary Sewers at Clinton, N. C.**

Sealed proposals for a system of Sanitary Sewers in the Town of Clinton, N. C., will be received by the Mayor and Commissioners until 3 o'clock P. M. Wednesday, April 28, 1915.

The work will consist of approximately 5 1/2 miles of vitrified-pipe sewers from 8 inches to 12 inches in diameter, to be constructed in accordance with the plans and specifications on file in the office of the Mayor.

Blank forms of proposal, specifications, etc., may be obtained from the Engineer.  
Certified check for 5 per cent. of the bid must accompany each proposal.

The right is reserved to reject any or all bids.

A. B. CRUMPLER, Mayor.  
H. A. JAMES, Clerk.  
Engineer:  
WILLIAM M. PIATT,  
Durham, N. C.

**Water-Works and Sewers**

Laurel, Md.

Sealed proposals addressed to George W. Waters, Jr., Mayor, Laurel, Md., and marked "Sewer and Water Bids," will be received until two P. M. May 1, 1915, for furnishing materials and constructing a complete system of sanitary sewers, extensions to water mains and other water-works improvements, comprising the following:

Approximately eight and seven-tenths miles of Sewers, 8-inch to 15-inch in diameter.  
Approximately three and one-quarter miles of Water Mains, 2-inch to 8-inch in diameter.  
Sewage Disposal Plant.  
Compressed-Air Sewage Ejectors.  
Rapid Sand Filter Plant for Water-works, comprising Building and Equipment.  
Motor-Driven Pumping Machinery.

Bids will be received for the entire work or for any portion thereof.  
Plans and specifications may be seen at the Collector's office, Laurel, Md., or at the office of Harry Stevens, Consulting Engineer, Union Trust Building, Washington, D. C., or may be obtained from the Engineer for \$10 (\$5) dollars per set.

Right is reserved to reject any or all bids or to accept any bid for the whole or any portion of the work.

For the information of prospective bidders, the town has the necessary funds for the above work deposited in the bank.

GEORGE W. WATERS, Jr., Mayor.  
HARRY STEVENS, Engineer.

**Power Equipment, Pump, Etc**

Dresden, Tenn.

Bids will be received until 2 o'clock P. M. May 1 at the Mayor's office, Dresden, Tenn., for the following material:

One 80 H. P. Boiler.  
One 50 K. W. Direct Connected Engine and Generator, together with switchboard, wire, lamps, etc.  
One 500-gallon Compound Water Pump, Hydrants and Valves, etc.

Bidders to submit manufacturer's specifications and guarantees for approval of Mayor and Board of Aldermen.  
R. L. SUDDATH, Mayor.

**Earth Levee**

Augusta, Ga.

Sealed proposals, addressed to the City Council of Augusta, Ga., will be received by the River and Canal Commission at its office, 747 Broad street, Augusta, until 4 P. M. Tuesday, April 27, for furnishing all labor and outfit and constructing complete earth levee along the Savannah River below the city of Augusta.

The work is divided into two contracts, known as sections Nos. 5 and 6. There will be approximately a half-million cubic yards in each section. A certified check for \$500 must be deposited with bid as a guarantee of good faith. A bond of \$20,000 on each section will be required from the successful bidders. Payments will be made in cash on monthly estimates.

The right is reserved to reject any and all bids. Plans and specifications may be had on application to the undersigned.  
NIBBET WINGFIELD,  
Chief Engineer.

**Fire and Steel Rolling Doors**

New Orleans, La.

Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans at their office, Suite 200 New Orleans Court Building, until April 28, at eight o'clock P. M., and then publicly opened, for the furnishing and installing of Fire Doors and Steel Rolling Doors, etc., for the cotton warehouses and terminal now under construction, located on the east bank of the Mississippi River near Valence street.

The contractor will be required to furnish a bond to the amount of one-quarter of the contract price, but not less than thirty thousand (\$30,000) dollars. Payments monthly to the extent of ninety (90%) per cent. of the Engineers' estimate of the work accomplished. Plans and specifications may be inspected at the office of Ford, Bacon & Davis, Engineers, No. 921 Canal street, New Orleans, Louisiana, by whom full sets will be furnished to prospective bidders on deposit of twenty-five (\$25) dollars. This amount will be refunded to all bidders who submit proposals and return said set in good condition to the Engineers. To bidders who do not submit proposal, fifteen (\$15) dollars will be refunded upon return of plans above.

The right is reserved to reject any and all bids.  
(Signed) ERNEST M. LOEB,  
President.

**Jail**

Greenville, S. C.

Bids will be received until twelve o'clock A. M. May 10, 1915, for the erection and completion of a jail for the County of Greenville, Greenville, S. C., in accordance with plans and specifications prepared by Joe T. Lawrence, Architect, Greenville, S. C., exclusive of steel work.

Bids will also be received at the same time and place for all steel work used in the above-mentioned building.

Plans may be had upon application to the Architect, said application to be accompanied by a certified check for ten dollars as a guarantee for the prompt return of said plans and specifications.

All bids must be accompanied by a certified check for five hundred dollars (\$500), made payable to J. I. West, Chairman of Jail Commission.

For any further information address the Commissioners or Joe T. Lawrence, Greenville, S. C.

J. I. WEST, Chairman;  
JNO. P. LOFTIS,  
R. F. PERRY, JR.,  
Greenville County Jail Commission.





# Barrett's PAVING PITCH



Hennepin Ave., at 26th St., Minneapolis, Minn. Creosoted Wood Block Pavement, filled with Barrett's Paving Pitch.

## Waterproof under All Conditions

**W**ATER and frost will ruin any road if they get into the foundation. Because this is so, the filler is as important a consideration as the brick or block of which the pavement is made. For a filler that is not waterproof under all conditions occasions endless repairs, expense and annoyance.

Paving Pitch is the only filler that forms an absolute waterproof bond, winter and summer. In cold weather asphalt loses its adhesive quality, the brick shrinks away from the brick

or block, and cracks result, letting the water in.

In hot weather cement, being absolutely rigid, leads to cracks and "blow-outs", due to expansion. Again the water gets in.

Paving Pitch follows the block and clings to it in all weathers. It will outlast the pavement. Nor has it any defects as a filler. There is, however, a big difference in pitch.

To be sure of permanent results insist on "Barrett's".

*Illustrated booklet free on request.*

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## INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

**Sewer Contract Awarded.**

Maywood, Ill., has awarded sewerage contract at \$85,000 to the Tonkawa Construction Co. of Kansas City, Mo. R. E. Williams of Chicago is the engineer.

**Marshall & Scott.**

Organization of the steel and iron work contracting firm of Marshall & Scott is announced by L. R. Marshall, 1301 Hampton Ave., Columbia, S. C.

**Removal of New York Office.**

New York office of the H. W. Clark Company, manufacturer of water-works appliances, Mattoon, Ill., has been removed to 50 Church St., where the company's Eastern representative, Thomas E. Irwin, will be located. As more room will be available at the new location, quite a number of water-works appliances will be on display.

**Duplicates Recent Order.**

The Buckeye Iron and Brass Works, manufacturer of brass goods, Inseed and cottonseed oil machinery, Dayton, O., reports that its superintendent, George A. Sauer, Jr., on a recent visit to New York was successful in closing contract for a duplicate 12-press outfit to be used in the Philippine Islands for the manufacture of coconut oil.

**Linen Mill for Sale.**

Land, buildings, machinery and all other assets of the Niagara Falls Linen Co., makers of linen damask, towels and toweling, will be sold at public auction May 5, 1915. This mill is thought to be the only linen mill in the United States making and marketing linen damask. It is said to be practically new, fully equipped and ready for immediate operation, with unfilled orders on the books. For complete information address Francis E. Adams, receiver, Niagara Falls, N. Y.

**Building Material.**

The Southern Building Material Co., Monocello Arcade Bldg., Norfolk, Va., reports extensive use of its products throughout the South and the furnishing of building material to many jobs in Maryland and Pennsylvania. Building material of all kinds, including architectural terra-cotta, all colors and textures of pressed brick, enameled, paving and common brick, stone, fireproof windows and doors, steel sash, lumber, plaster ornaments, sewer pipe, lime, cement, roofing tile and slate, metal lath, hollow tile, structural steel, ornamental iron, terrazzo, tile and marble, beach sand, etc., is handled by the Southern Building Material Co.

**To Install Tramways.**

Sioux City Brick & Tile Co. of Sioux City, Iowa, has contracted with the Ambursen Company, 61 Broadway, New York, for two tramways, respectively 300 feet and 2000 feet in length. The shorter tramway is to clear away an overburden of soil, and its capacity is 1000 cubic yards per day. The longer tramway is for transporting sand from the pit when uncovered to the railroad siding. Its capacity is 500 cubic yards per day. Both tramways will be driven by electric motors. Several new adaptations are introduced into these tramways, such as movable loaders, drop-bottom dumping cars, variable angles, etc. Conditions of loading and discharging are said to be very unusual and severe.

**Pullman Exhaust Ventilator.**

After considerable experimenting, the Pullman Automatic Ventilator Manufacturing Co. of York, Pa., announces the development of a small ready-to-run exhaust ventilator which is said to be the smallest electric-driven exhaust unit on the market. The device has a number of new and well-thought-out features. It will be supplied in a portable panel, ready to install above or beneath a window, or the motor, frame and fan may be bought separately and installed directly in opening in the wall. Additional information pertaining to the Pullman "whirlwind" exhaust ventilator is

given in a booklet which can be secured by addressing the manufacturer and mentioning the Manufacturers Record.

**Activity in Engineering Work.**

Monongahela Valley Engineering Co., 208 High St., Morgantown, W. Va., has recently purchased the good-will and business of the West Virginia Engineering Co. of Fairmont, W. Va., and will continue the office at Fairmont in conjunction with its Morgantown office, with J. S. Henshaw as resident engineer. The company makes a specialty of coal-land development, also railroad, structural, highway, municipal and water-works engineering. At the present time the Monongahela Valley Engineering Co. reports it is engineer in charge of operations at from 15 to 20 coal mines, of the construction of a limestone crushing and pulverizing plant, of a large reinforced concrete bridge, is completing the construction of 15 miles of electric railway, and is preparing for the development of two or three coal mines.

**Gas-Engine Sales.**

Recent gas-engine sales, including many Southern installations, are reported by the Bruce-Macbeth Engine Co. of Cleveland, O., to have been made to the following firms: Magnolia Petroleum Co., Fort Worth, Tex., one 150-horse-power natural-gas engine; Kloss Ice Cream Co., Wheeling, W. Va., one 90-horse-power four-cylinder natural-gas engine; Postoria Glass Co., Moundsville, W. Va., one 150-horse-power natural-gas engine, making the fourth Bruce-Macbeth engine ordered by this company; McJunkin-Straight Dairy Co., Pittsburgh, Pa., one 150-horse-power natural-gas engine, including steam process; Empire Marble Co., Cleveland, Ohio, one 90-horse-power four-cylinder natural-gas engine; Broadway Market Co., Detroit, Mich., one 90-horse-power four-cylinder artificial-gas engine; Alhambra Theater, Sandusky, Ohio, one 40-horse-power natural-gas engine; O. Hummel Company, South Carnegie, Pa., one 70-horse-power natural-gas engine; Fedders Manufacturing Co., Buffalo, N. Y., one 100-horse-power natural-gas engine; Knickerbocker Amusement Co., Detroit, Mich., one 60-horse-power artificial-gas engine; Mansfield (Ohio) Milling Co., one 350-horse-power natural-gas engine and steam process; The Gallon (Ohio) Iron Works & Manufacturing Co., one 150-horse-power natural-gas engine; Setter Bros. Company, Cattaraugus, N. Y., one 125-horse-power natural-gas engine; Brookville (Pa.) Glass & Tile Co., two 90-horse-power natural-gas engines; The Dunn-Taft Company, Columbus, Ohio, one 150-horse-power natural-gas engine, and one 200-horse-power gasoline engine to the New York Central Railroad Co., to be used on the Calumet River Lift Bridge at South Chicago.

**TRADE LITERATURE****Concrete Roads.**

In the April issue of "Concrete Roads," published monthly by the Universal Portland Cement Co., 208 S. La Salle St., Chicago, Ill., special attention is given to the concrete roads constructed in Eastern Maryland. State road work of Maryland and the men behind it, curing concrete roads by ponding, and concrete road news and notes, with illustrations of concrete roads under construction and after completion, are among the interesting subjects discussed in this number.

**Arkansas State Map and Guide Book.**

A wall and pocket map index and shippers' guide of Arkansas, showing all railroads and express companies operating on each road, cities, towns and villages with postoffices particularly designated, has been compiled by F. L. Blaisdell and issued by F. M. Blaisdell, architect, civil engineer and landscape architect, 308-311 Bankers' Trust Bldg., Little Rock, Ark. Special features of the book comprise data on forest reserve locations and homestead laws of Arkansas, elevations of various towns, natural-gas pipe lines, population of cities, towns and villages, etc. The price of this book is 25 cents.

# LINK-BELT ELEVATORS AND CONVEYORS

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Stone—Gravel—Sand, Etc.

And All Materials in Bulk or Package



The illustration shows a 75-foot Link-Belt Continuous Bucket Elevator of a type extensively used where the stone does not run over 3" or 4" in size. It consists of a single strand of "Ley" bushed chain with continuous buckets—return run hangs free, carrying run supported on idlers. This elevator carries 80 tons per hour. We have built elevators of this style from 5 feet to 187 feet high, carrying from 2 tons to 600 tons per hour. The outfit is simple and efficient.

The increasing use of stone, sand and gravel for road and concrete work has created a demand for efficient machinery to handle these abrasive and gritty materials

The same careful planning, and attention to details, which have always characterized our work, will be found in Link-Belt stone and sand handling machinery.

Our engineering advice, based on long experience in designing and building this type of equipment, is at your service.

Booklets illustrating and describing our various products will be mailed to interested parties upon request.

Write for Catalog and State Requirements

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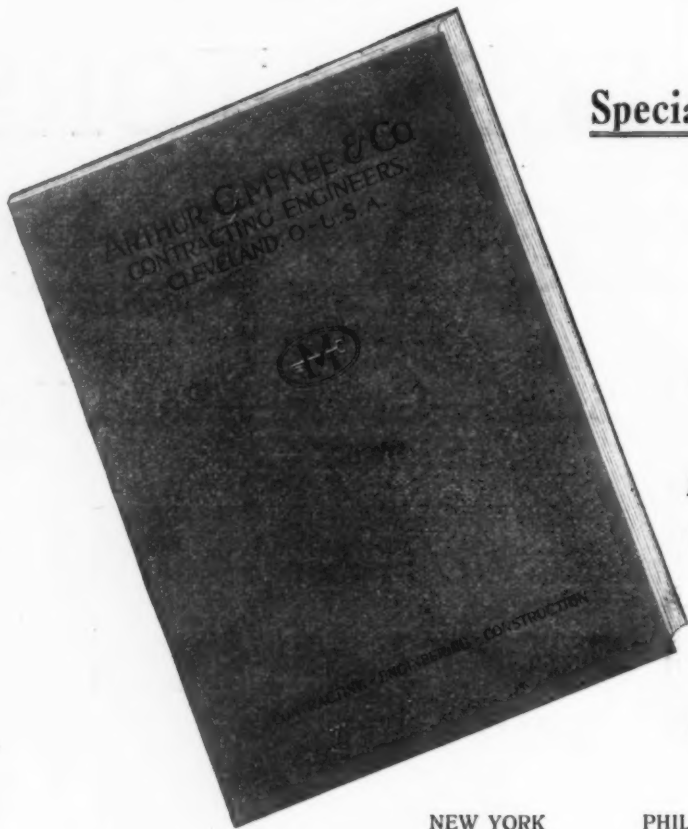
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Wilkes-Barre.....2d Nat'l Bank Bldg.  
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## Special Advertisements of General Interest.

### BRICK YARD FOR SALE

Stiff mud Chambers Machine, situated about 12 miles from Newport News; on the water; about 30 acres; good clay. Clay makes best brick in this section. Good reasons for selling. Terms reasonable.

Address P. O. Box 348

NEWPORT NEWS, VA.

### Sale of WATER-WORKS

Notice is given that on the 22d day of May, 1915, at Morrillton, Arkansas, I will offer for sale, on a credit of three months, all the property, real and personal, rights, privileges and franchises of the Morrillton Water-works Company of Morrillton, Arkansas. This March 15, 1915.

M. H. DEAN,  
Commissioner in Chancery,  
Morrillton, Arkansas.

**Merchants Looking for Better Location**  
with all conditions in their favor, should write me about new EARLE BUILDING, Birmingham, Ala.—five stories and basement, strictly modern, full fireproof construction, in heart of city, and one hundred feet from best improved corner in the South.

R. A. TERRELL  
503 Title Guarantee Bldg. Birmingham, Ala.

### BRICK PLANT FOR SALE OR LEASE

One of the best located and equipped operating Brick Plants in the Southwest. Manufacturers of vitrified face and paving brick. Matt face a specialty. Located at Ft. Smith, Ark. Trade covers part of four States. Terms can be made to suit a responsible purchaser. Capacity, 75,000 brick per day.

Address BURKE BRICK COMPANY, Ft. Smith, Ark.

### LINEN MILL FOR SALE

Practically new. Product well known. Unfilled orders on the books. Fully equipped and ready for immediate operation.

The Land, Buildings, Machinery and all other assets of the Niagara Falls Linen Company, makers of Linen Damask, Towels and Toweling, will be sold at public auction Wednesday, May 5, 1915, at 2 P. M. Corporation dissolved through inability to obtain working capital.

#### A RARE OPPORTUNITY

For complete information address

FRANCIS E. ADAMS, Receiver  
NIAGARA FALLS, N. Y.

1887 1915

Timber, mineral, ranch and cutover lands, all Southern States, for sale and wanted. Corporation, municipal and other bonds placed. Capital for industries. Write if wanting sale or purchase.

W. W. MARMADUKE  
Washington, Indiana

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In New England territory would like to represent reliable concern in iron or machinery line, straight commission basis. Prompt attention to all inquiries. Have storage facilities—salesmen on road—equipped with business autos. Write for information. Address

VULCAN CO. Allston Sta., Boston

### FOR SALE

The undersigned offers for sale the fabricating plant of the Lehigh Valley Structural Steel Co. at Allentown, Pa.

The buildings are of steel construction with roofs and sides of glass and galvanized corrugated steel. Machinery and equipment is of the most modern type and has been used very little, and is ready for immediate operation.

The plant is ideally located—5 miles from Bethlehem Steel Works, 60 miles from Philadelphia, 90 miles from New York. Direct connections with Lehigh Valley Railroad, Philadelphia & Reading Railroad, Central Railroad of New Jersey and Lehigh Canal (all in yard), with very attractive freight rates.

An exceptional opportunity for anyone desirous of going into the business of fabricating steel for buildings and bridges.

WILLIAM A. HAUSMAN,

1142 Hamilton St.

Allentown, Pa.

### INDUSTRIAL PLANTS FOR SALE

Water Power, Flouring Mill and Electric Plant. Four turbine wheels, capacity 550 H. P. Modern machinery in excellent condition. Modern residence of 12 rooms, splendid orchard and 26 acres of land, one-half mile from depot, Wytheville, Va., and in heart of grain section.

This is an established business, paying extra good dividends. Owner's only reason for selling, age and bad health. For particulars address LEE UMBERGER, Wytheville, Va.

### Boilers For Sale

5—550 H. P. Altman Taylor B. & W. type, 150 lbs. pressure, complete, with steel supporting structure—arranged to set two in battery, one battery equipped with Taylor stokers.

HENRY R. KENT & CO.

141 Broadway

New York, N. Y.

## MEN WANTED

If you are looking for a position, read this department in our Classified Opportunities every week. Should an opening not be there that is entirely to your liking, advertise for it under "Situation Wanted."

**Manufacturers Record**

## BUSINESS OPPORTUNITY

Desire to sell a \$250,000 Alabama cotton mill at great sacrifice, or will consider offer of partnership from reliable party with \$25,000 to \$40,000 in order to buy plant and operate on duck, osnaburg, sheeting and rope. Will take stock in new company or will join with partner in the enterprise.

ADDRESS, FOR FURTHER DETAILS

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PLATTVILLE, ALA.



KAOLIN CONSUMERS may find it to their interest to secure full information about a deposit of HIGH-GRADE KAOLIN recently discovered and developed in the Shenandoah Valley of Virginia.

Chemical analysis gives following results:



Silica.....	66.36
Aluminum Oxide.....	22.66
Iron Oxide.....	1.70
Calcium Oxide.....	Trace
Magnesium Oxide.....	.35
Loss on Ignition.....	6.36
Alkalies, &c.....	.57

The deposit contains about one million tons. Physical tests made of material show it to be of a very high grade, having great plastic qualities, burns white and uniform.

No better or larger deposit of kaolin available anywhere. Good location for pottery or tile factories. Clay consuming industries may find it advantageous to locate where raw material, labor and transportation facilities are equal to the best.

Write for detailed information to

F. H. LA BAUME, Agr'l and Ind'l Agent, N. & W. Rwy., Roanoke, Virginia,  
REFERRING TO FILE M-5993.

## Sale of the Langley, Aiken and Seminole Cotton Mills in Aiken County, South Carolina, Under Order of the United States Court

As Receivers of the Langley Manufacturing Co., the Aiken Manufacturing Co. and Seminole Manufacturing Co., we will sell, by virtue of a decree of the United States Court at Aiken, S. C., in front of the Courthouse at said place, at 12 o'clock M., on Tuesday, May 4, 1915, as a going concern in each case, the property, real and personal, of the aforesaid mills. The official advertisement can be seen in the Journal and Review, a newspaper published at Aiken, S. C., and the stipulations and conditions of the sale can be obtained therefrom, or upon further application to us at our office, Bath, S. C., or to our attorneys, Messrs. Hendersons, Aiken, S. C., or H. W. Hutson, Clerk of the United States Court, Charleston, S. C. The sale will include not only the real estate, buildings, mills and all other structures on the property of the various companies, but all rights and privileges connected with and now appertaining thereto according to law. Briefly stated, in the case of the Langley Manufacturing Co. the land consists of forty-six hundred (4600) acres, more or less; of Aiken Manufacturing Co., two thousand and thirty-eight (2038) acres, more or less; of the Seminole Manufacturing Co., sixteen hundred (1600) acres, more or less. Each bidder must qualify himself before bidding by depositing five thousand dollars with the Receivers. The terms of sale are cash and subject to other conditions stated in the decree.

GEORGE R. LOMBARD,  
GEORGE E. SPOFFORD,  
Receivers.

## Your chance to open up a new market for your goods in SOUTH AMERICA

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Personal Representatives in Brazil and the Argentine Republic.

## Bargains in Machinery and Supplies.

### Used Machine Tools

Large stock of miscellaneous material—ready for delivery. Send for complete list.

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- 1 No. 4 Geared "Bliss."
- 1 No. 4 "Bliss."
- 1 No. 3 "Bliss."
- 1 No. 2 "Henderson."
- 1 No. 2 "Bliss."
- 1 No. 1 "Henderson."
- 2 No. 3 1/2 "Greenard" arbor.

#### PUNCHES and SHEARS

- 1 Dbl. end "Industrial."
- 1 Dbl. end No. 2 "Roversford."
- 1 No. 6 single end "Cincinnati."
- 1 30" blade guillotine shear.
- 1 No. 0 guillotine shear, "Hilles & Jones."
- 1 23 1/2" throat single end punch, "Clisco."
- 1 36" power squaring shear, "Obl."
- 1 Combination hand-power punch and shears.
- 1 No. 4B combination hand power punch and shears, "Buffalo."

#### PLANERS

- 1 52"x52"x25" one head "Betts."
- 1 40"x40"x11" one head "Powell."
- 1 38"x38" widened to 60"x10" "Gray."
- 1 37"x36"x11" three heads "Belmer-Eames."
- 1 36"x36"x12" one head "Powell."
- 1 36"x36"x9" one head "Pond."
- 1 30"x30"x15" two heads "Gray."
- 1 30"x30"x9" two heads "Cincinnati."
- 1 27"x27"x9" two heads "Woodward-Powell."
- 1 24"x24"x6" "Flather."

L. F. SEYFERT'S SONS, Inc.

437-441 N. Third St. Philadelphia

## PUMPS Blowers and Filter Tanks

One Deane Steam Pump, No. 16165, horizontal duplex double-acting compound non-condenser plunger and ring pattern, 14-20-12-18.

One Worthington Steam Pump, No. 100,182, size 7 1/2 x 14 x 10.

Filtration Plant, manufactured and installed by New York Continental Jewell Filtration Co., original cost \$5500, consisting of 4 filter tanks 16 ft. in diameter by 8 ft. high, with 2 ft. of sand in each; worth \$1000. Also, F. M. Roots Co. 4-in. Centrifugal Blower, size 2, No. 27271, with upright engine, No. 8148, made by N. Y. Steam Power Co., for operating same.

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- 10x30 Allis.
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- 28x48 Hamilton. Heavy Duty.
- 30x60 Heavy Duty H. & B.
- 32 & 62x60 Allis Hor. Cross. C. H. D.
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### Modern First-Class Machinery A SPECIALTY

Every piece rebuilt and guaranteed; prompt deliveries.

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- 16"x32"x36" Hamilton Cross Compound, 500 H. P., extra heavy.
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- 16"x30" Watts-Campbell L. H., 150 H. P.
- 16"x30" Wetherill R. H., 150 H. P.
- 12"x36" Greene R. H., 110 H. P.
- 12"x30" Greene R. H., 100 H. P.

Automatic and Slide Valve Engines, Vertical and Horizontal, all sizes.

#### DUPLEX STEAM PUMPS

- Steam 20", water 12", stroke 12", "Snow," outside packed.
- Steam 16", water 9", stroke 24", "Barr," outside end packed.
- Steam 12", water 8", stroke 10", "Advance." And many others.

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- 3000 H. P. Goubert, heavy pressure.
- 1500 H. P. Webster.
- 1000 H. P. Berryman Gleaner.
- 500 H. P.; 300 H. P.; 200 H. P.; 100 H. P. Cochrane, and many others.

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All sizes. Steam and belt driven.

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15 tons ice, 30-ton refrigerating; Penna. Iron Works; Corliss driven.

Large stock of Machine Tools.  
Write for complete catalogue; correspondence solicited.

HERMAN L. WINTERER  
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PHILADELPHIA

USED  
MOTOR CARS  
AND  
TRUCKS

ASK FOR LATEST LIST TODAY  
MAR-DEL MOBILE CO.  
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REFERENCES—BRADSTREET OR DUN.

### AT A BARGAIN

10,000 feet 22" Riveted Steel Dredge Pipe (first-class condition, practically good as new) at 50c. per foot f. o. b. cars, for immediate shipment.

2 1,000,000-gallon D'Auria Pumps (can now be seen working).

1 Ingersoll-Sargent Straight Line Air Compressor, 22x22 1/4 x 24.

1 Ingersoll-Sargent Straight Line Air Compressor, 16x16 1/4 x 18.

2 Ingersoll-Sargent Straight Line Air Compressors, 12x16 1/4 x 14.

PLANTS BOUGHT AND DISMANTLED.

Boston Iron & Metal Company  
Baltimore, Md.

### FOR SALE Cheap Before Removal

Train, two 21" Roughing Mills.  
Train, four 12" Guide Mills.  
Train, three 10" Guide Mills.  
600 H. P. Buckeye Twin Steam Engine.  
600 Wetherill Corliss Rolling Mill Engine.  
Two-ton Sprague Electric Hoists, D. C.  
400 H. P. Motor A. C. Switchboard.  
50 H. P. A. C. Motors.  
No. 5 1/2 Root Blowers, with valves.  
4" and 6" Air Hoists.  
Covington Vertical Shear, cap. 4" sq. cold.  
Jib Cranes, Scales, etc.  
We purchase the entire equipment of industrial plants.  
What have you for sale?

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### FOR SALE CHEAP

One Land Pile Driver, 3000-lb. hammer, 50 ways and steel rollers.  
Four Steel-Guyed Stacks, 6"x100".  
One Steel Self-Supporting Stack, 10"x150".

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415 N. Front St BALTIMORE, MD.

### Machinery Bargains

14-ton 9"x14" Porter Locomotive, 36" gauge.  
4-yd. K. & J. Dump Cars, 36" gauge.  
3-yd. All-Steel Dump Cars, 20" gauge.  
200 tons 60 and 70-lb. Relaying Rails.  
130 tons 12 and 16-lb. Relaying Rails.  
175 tons 12" 36 and 40-lb. Sheet Piling.  
50 24" 80 and 100-lb. I Beams, 30 to 20.  
300 15" 42 and 60-lb. I Beams, 15 to 18.  
200 12" 40-lb. I Beams, 15 to 18.  
40 100x15 All-Steel Frame Buildings complete, ready to erect.

Write for Free Complete List No. XB-212.

Harris Brothers Company, Owners

CHICAGO HOUSE WRECKING CO.  
35th and Iron Sts. CHICAGO, ILL.

#### MODERN PUMPS

Offered at a great bargain

Two (2) duplex compound plunger outside end packed, pot valve type, Epping-Carpenter, piston valve, steam pumps—Size 14x22x12x24, metallic packed and complete with Ford governor.  
Excellent condition and late design.  
H. P. BREARLEY, 90 West St., New York

1 100 K. W. 125-250-volt Sprague Generator, D. C. to 10 and 20x16 Ball & Wood Tandem Semi-Corliss Four-valve Engine.  
Boilers, Gas Engines, Motors.  
Tell us what you want.

EDGAR M. MOORE & CO.  
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#### FOR SALE

1 40 H. P. Westinghouse Engine, 25 K. W., 110-volt dynamo.  
2 New 54" Vertical Boring Mills.  
3 1" Bolt Cutters.

Detrick & Harvey Machine Company  
BALTIMORE, MD.

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IN EXCELLENT CONDITION

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Direct Current Generating Sets, 250 and 550 volts.  
Boilers, 150 H. P., Return Tubular.  
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Separators, Steam Traps and Piping.  
Steam Pumps, Piston and Plunger, best makes.  
Mining Equipment. Full list furnished on request.

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Equipment Sales Department MACDONALD, W. VA.



## REFRIGERATING MACHINE

3-Ton Racine Vertical, two cylinder, belted type Refrigerating Machine, complete with condenser, ammonia receiver, oil trap, gauges, cooling-room coils and hold-over tank; little used. Bargain for quick sale; less than one-half new cost.

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## Complete Power Plant FOR SALE

1 200 H. P. 78" in diameter by 20' long Horizontal Tubular Boiler of the BUTT STRAPPED TRIPLE RIVETED type, containing 92 4" tubes, good for 125 lbs. steam pressure, complete with full flush front, grate bars, fittings and attachments.

1 150 H. P. 14x30 Hamilton Right Hand Corliss Engine; band wheel 10' in diameter by 19" face.

1 18" Double Leather Drive Belt 60' long.

1 Suitable Size Closed Type Feed Water Heater.

1 Suitable Size Duplex Steam Pump.

Also, Pipe, Valves and Fittings.

This plant is practically new and can be seen on the foundation at Clinton, Iowa. We will sell same at an exceptionally low price before we remove it to our warehouse in Chicago.

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## Air Compressor, Tank, Beam Shear, Motor, Etc.

### FOR SALE

One Blaisdell Air Compressor, Class AA, size 10x10, speed 150, direct connected with 25 H. P. Westinghouse Motor, 25 cycles, 220 volts, 3-phase.  
One Automatic Cut-off Controller.  
One Air Tank.  
One "Johns" Patent Beam Shear, capacity 20' 65-lb. beams, with knives and blocks.  
One 10 H. P. Westinghouse Motor, 220 D. C.

Chesapeake Iron Works  
BALTIMORE, MD.

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One Sebute & Koerting Deodorizer. One Blake Special Duplex Pump, 12x8½x10, capacity 600 gallons per minute. One "O" Universal Hammer Mill, manufactured by Williams Patent Pulverizer and Crusher Co. One 50 H. P. Comm. Center and Side Crank Engine, manufactured by Talbot Bros. One Denmead Patent Disintegrator. One 30 H. P. Erie Horizontal Engine (good as new). One Steam-jacketed Drier, 15½ ft. long, 5 ft. 4 in. diameter, complete with gear, etc. Lot pulleys, shafting, drag conveyors, sprockets, screen, etc.

Rowe Bros. & Son Co., Inc.  
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## One 75-Horse-Power DIESEL OIL ENGINE

Three-Cylinder Belted Type; installed larger power; seen running. Bargain. Address

Box 545, Manufacturers Record

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All sizes new and second-hand Pulleys, Belting, Shafting, Hangers, Couplings, Pillow Blocks, Collars, etc.

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75 K. W., 125 V., 275 R. P. M. Ridgway Dynamo & Engine Co. outfit in excellent condition, \$700 before removal.

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145 N. Third Street. Philadelphia, Pa.

In replacing our manufacturing equipment we find the following first-class

## Used Machine Tools

which we offer at attractive prices

### ENGINE LATHES

No. 162-16"x8" Reed.  
No. 5-Two 17"x6" Gray.  
No. 9238-Two 18"x8" Lodge & Shipley Patent Head.  
No. 142-18"x10" Lodge & Shipley Motor-Driven Patent Head.  
No. 136-20"x12" Lodge & Shipley Patent Head.  
No. 7385-24"x12" Lodge & Shipley Patent Head.  
No. 49 D-24"x12" Sellers.

### SPECIAL LATHES

No. 76-No. 3 Lodge & Shipley Rapid Reduction.  
No. 5302-20"x16" Lodge & Shipley High Speed.  
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No. 1306-14"x6" Towsley 4-step Cone Speed.  
No. 199-14"x6" Flather Tool Room.

### TURRET LATHES

No. 28-16"x8" Lodge & Shipley 3-step Cone.  
No. 111-22"x7" Lodge & Shipley 3-step Cone, Friction Head.  
No. 122-Two 24"x10" Lodge & Shipley 3-step Cone, Friction Head.

### PLANERS AND SHAPERS

No. A-30"x30"x10" Detrick & Harvey Open Side.  
No. B-36"x36"x12" Niles.  
No. 248-30"x30"x10" Gray.  
No. 219-24"x24"x12" Ohio.  
No. 238-16" Queen City Back Geared.  
No. D 223-26" Smith & Mills Shifting Belt.

### HORIZONTAL MILLERS

No. 313-Three Cincinnati No. 4 Plain.  
No. 328-Cincinnati No. 3 Plain.  
No. 323-LeBlond No. 3 Plain.  
No. 342-LeBlond No. 2½ Plain.  
No. 346-LeBlond No. 4 Heavy Duty.

### MISCELLANEOUS

No. 347-Burke Hand Miller.  
No. 432-Gardam Multiple (four-spindle) Drill.  
No. 1650-2"x8" Rockford Straightening Machine.  
No. 1336-Sturtevant Blower. Diameter of outlet, 3½".  
No. 2531-Sturtevant Blower. Diameter of outlet, 2½".  
No. 1326-Two 2" Cleveland Automatic Turret Machines.  
No. 1340-1" Cleveland Automatic Turret Machine.  
No. 1329-2½" Hartford Automatic Screw Machine.  
No. 683-Mueller Grindstone Frame for 4"x27" stone.  
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No. D-West Haven Hack Saw (for 6" stock).  
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No. 1363-12"x40" Mumford Molding Machine.  
No. 1379-Universal Swivel Table for Radial Drill.  
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No. 1401-Gleason Mitre Gear Tester.  
No. 681-Globe Tool Sharpener for ½"x6" wheels.  
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The Lodge & Shipley Machine Tool Co.  
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## Motors, Dynamos, Switchboards, Etc.

400 H. P. G. E. Induction Motor, 720 R. P. M., 2200 volts, complete.....\$3000.00  
75 H. P. Westinghouse, slip ring..... 425.00  
75 H. P. G. E., slip ring, new, 850 R. P. M., complete..... 500.00  
50 H. P. Allis-Chalmers, 3-phase, new, 850 R. P. M., complete..... 300.00  
50 H. P. G. E., 2-phase, 850 R. P. M., complete..... 245.00  
35 H. P. G. E., 3-phase, 850 R. P. M., complete..... 215.00  
35 H. P. Westinghouse, 2-phase, 1140 R. P. M., complete..... 200.00  
25 K. W. C. & C. to Watertown engine, 115 volts..... 400.00  
30 K. W. Eddy to New York safety engine, 120 volts..... 500.00  
Large stock of smaller motors and dynamos, both A. C. and D. C. Let us have your requirements.

R. Scheinert & Co., 125 N. Third St., Philadelphia

## FOR SALE-New Lathes at Bargain Prices

Geared head 20"x10", 18"x10", 18"x8", 16"x8", 16"x6". Cone head 20"x10", 15"x8", 15"x6". All the above with semi-quick-change gears. Second-hand lathes with geared heads, quick-change gears, 16"x8", 16"x6", 15"x8". Second-hand lathes, cone head, plain gears, 28"x12", 27"x16", 20"x10", 18"x8", 13"x6", 13"x5".

CHAS. T. LEHMAN, Birmingham, Ala.

### OIL ENGINES

80 H. P. De La Vergne twin-cyl. Oil Engine, \$1500.  
50 H. P. De La Vergne twin-cyl. Oil Engine, \$1200.  
32 H. P. De La Vergne Oil Engine, \$700.  
30 H. P. Diesel 2-cyl. Oil Engine, \$500.  
20 H. P. De La Vergne Oil Engine, \$450.  
15 H. P. De La Vergne Oil Engine, \$350.

### DUZETS & SONS

Hudson Terminal Bldg. NEW YORK

## BOILERS

3 150 H. P. B. & W., 150 lbs. pressure.  
200 H. P. Erie City, 150 lbs. pressure.  
200 H. P. Heine, 160 lbs. Marine Casing.  
2 250 H. P. Sterling, 150 lbs. pressure.  
4 250 H. P. Heine, 160 lbs. pressure.  
2 300 H. P. Edgemoor, 175 lbs. pressure.  
350 H. P. Heine, 150 lbs. pressure.  
6 550 H. P. B. & W.-A. & T., 150 lbs. pressure.

WILSON MACHINERY CO.  
419 Pine St.—OTHER SIZES—St. Louis.

## Special Bargains in Sanders

1 42" 3-drum Perfection Sander, thoroughly overhauled.....\$350.00  
1 48" 3-drum Thomas Sander.....\$400.00  
1 48" 4-drum H. B. Smith Sander.....\$500.00  
1 48" 3-drum Royal Invincible Sander, used only 3 weeks.....\$550.00  
1 54" 3-drum J. A. Fay & Co., fine order.....\$500.00  
1 60" 3-drum Columbia Sander in A-1 condition.....\$600.00

### JOINTERS

1 20" Carrey Hand Jointer.....\$100.00  
1 30" Buss Extra Heavy Hand Jointer.....\$125.00  
Woodworking machinery of all kinds. Write, stating your requirements.

CLEVELAND BELTING & MACH'RY CO.  
1922 Scranton Road Cleveland, O.

The best in USED MACHINE TOOLS always available in our warehouse.

Send for List.

Prentiss Tool & Supply Co.  
NEW YORK.

### STEAM ENGINE AND MOTOR DRIVEN PUMP

25 H. P. 8x12 Nagle Center-Crank Plain Slide-Valve Engine in excellent condition at low price.

Motor-Driven Centrifugal Pump, 250 gals. per min. against a 225-ft. head, practically new, at half price. Will equip with any style motor desired.

Electrical apparatus of all kinds at lowest prices.

V. M. NUSSBAUM & CO.,

Fort Wayne, Ind.

## ELECTRICAL UNITS

One 105 K. W. 220-volt 3-phase 60-cycle Westinghouse Revolving Field Alternator, direct connected to 15"x16" Buckeye Horizontal Automatic Engine. This outfit practically new; can reconnect for other voltages.

One 100 K. W. 2300-volt 3-phase 60-cycle G. E. Revolving Field Alternator, direct connected to three-cylinder vertical Producer Gas Engine with Producer.

Two 17 K. W. 125-volt D. C. Westinghouse Generators, direct connected to 7½"x7" Westinghouse Standard Vertical Engines.

These outfits are all first class in every respect, having been carefully overhauled by competent electricians, and are ready for immediate shipment.

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60"x60"x14" Sellers Planer, 4 heads.  
60"x60"x14" Pond Planer, 2 heads.  
48"x48"x15" Sellers Planer, 2 heads.  
72" Bickford Vertical Boring Mill, 2 heads.  
60" Sellers Vertical Boring Mill, 2 heads.  
48" Sellers Vertical Boring Mill, 2 heads.  
36" Bickford Radial Drill.  
3500 lbs. Bement-Miles Double-Frame Steam Hammer.  
350 lbs. Bement-Miles Single-Frame Steam Hammer.  
6" Oster Pipe Machine.  
No. 3 Kempsmith Plain Milling Machine with universal dividing heads.  
36"x12" Hess Heavy-Duty Slab Milling Machine.  
12" Niles Slotter.  
38"x20" Fifeid Lathe, triple geared.  
26"x12" Fifeid Lathe, triple geared.  
6" Coxie Pipe Machine.  
16"x6" Hendey Lathe, taper attachment.  
14"x8" Hendey Lathe.  
10" Bignall & Keeler Pipe Machine.  
30" Throat Double-End Punch and Shear, weight 3500 lbs.  
14"x5" Lodge & Shipley Lathe, pan bed, taper attachment.  
30 new Lathes 14 to 20" in stock; immediate delivery.

### POWER EQUIPMENT

#### Boilers

2 350 H. P. Sterling Water Tube, 150 lbs. steam working pressure.  
2 250 H. P. Franklin Water Tube, 150 lbs. steam working pressure.  
1 150 H. P. Babcock & Wilcox Water Tube, 150 lbs. steam working pressure.  
6 150 H. P. 72"x18" Horizontal Tubular, 125 lbs. steam working pressure.

### CORLISS ENGINES

24"x42" Allis, left hand.  
18"x42" Watts-Campbell, right hand.  
16"x36" Allis, left hand.

## THERE IS A REASON

why our properly rebuilt Machinery gives satisfaction

### ASK US

ENGINES, CORLISS: 18x42 Hamilton; 16x42 Brown; 16x42 Hamilton; 14x42 Hamilton; 14x36 Nagle; 12x30 Hamilton; 10x24 Hamilton.

ENGINES, AUTOMATIC: 21x22 Ridgway; 19x18 Ball; 14x14 Erie; 10x16x12 Buffalo Compound; 13x12 Ball; 12x14 Green; 12½x12 Armstrong & Sims; 10x18 Buckeye; 8x14 Noyes; 8x10 McKewen; 5x6 Harrisburg.

ENGINES, THROTTLING: 30x24 H. S. & G.; 16x18 Ames; 14x14 Lewis, vertical; 13x16 Erie; 12x14 Gibbs; 11x16 H. S. & G.; 10x16 Lane & Bodley; 10x12 new Handle; 8x12 Erie; 8x10 Brownell; 7x10 Union; 6x8 Industrial, vertical; 5x6 Industrial; 3x4 Kriebel.

BOILERS, STATIONARY: HIGH PRESSURE: 1 200 H. P. for 125 lbs.; 2 150 H. P. for 125 lbs.; 1 125 H. P. for 125 lbs.; 3 100 H. P. for 110 lbs.

BOILERS, STANDARD: From 150 to 20 H. P. for 100 lbs.

BOILERS, LOCOMOTIVE FIRE BOX: From 150 to 10 H. P., high and low pressure.

BOILERS, VERTICAL: 60 to 4 H. P., plain and submerged tubular.

GENERATORS AND MOTORS: Belted and direct connected.

MISCELLANEOUS: Heaters, open and closed; pumps, all sizes; sawmills; corn mills and feed grinders; exhaust fans and blowers; woodworking machinery; iron-working tools; leather, rubber and canvas stitched belts; pipe, valves and engine and boiler fittings.

Sole manufacturers of the "Leader" Injector and Ejector. Ask for circular.

THE RANDLE MACHINERY CO.  
1734 Powers St., Cincinnati, O.

## ELECTRICAL MACHINERY

Big Bargain for quick sale. Slightly-used 400 K. W. revolving field, 3-phase, 60-cycle, 440-volt, 450 H. P. M. Westinghouse Generator with exciter and two-panel switch-board.

Engineer, Box 51, Station A, Cincinnati, Ohio

## BORING MILL

84" Sellers, overhauled by Sellers Co., complete with 2 heads, \$650.

4 2½x6 Deane Triplex Pumps, designed for 750 lbs. pressure, \$60 each.

Geo. Sachsenmaier & Co 145 N. 3d St., Phila., Pa.

2 14"x36" Scottdale, right and left hand.  
14"x36" Lane & Bodley, left hand.  
12"x36" Allis, left hand.

### FIRE PUMPS

2 500-gal. 14"x7½"x12" Underwriter's Fire Pumps.

### AIR COMPRESSORS

1 18" x 20½" — 13¼" x 24" Ingersoll-Sargeant Class A Straight Line, two-stage. Capacity 940 cu. ft.  
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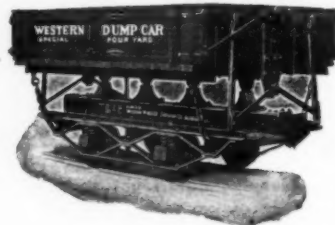
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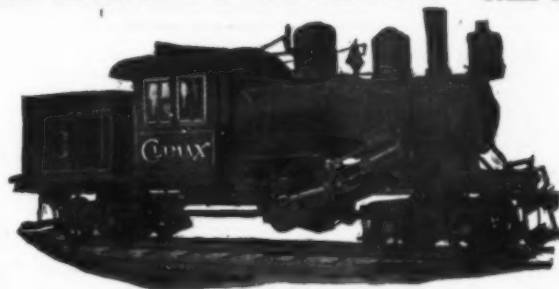


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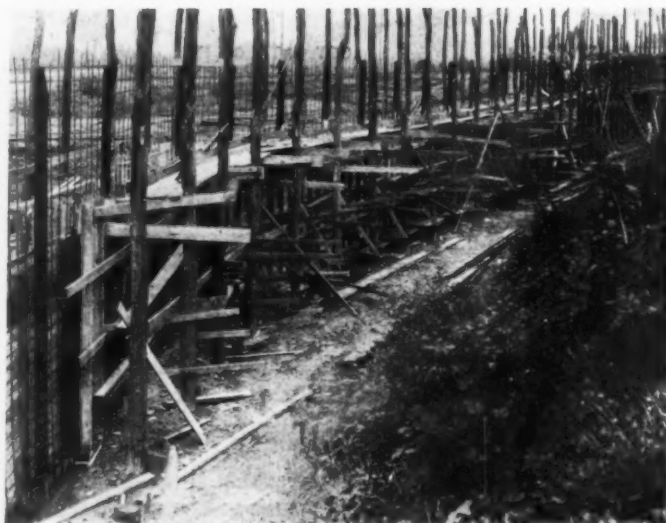
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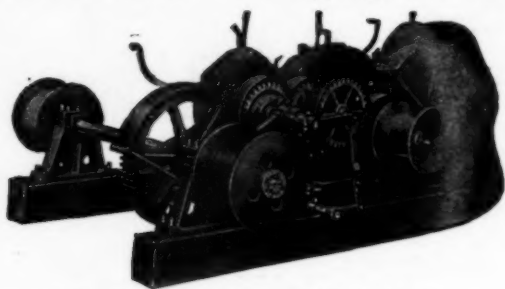
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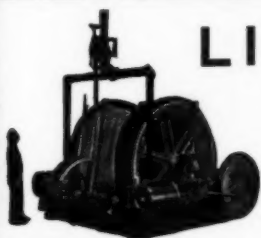
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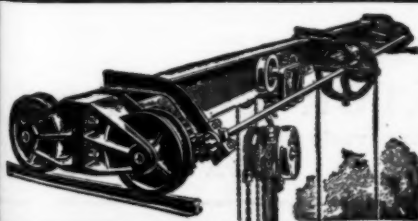
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1200 Thews are now in operation and our policy is to give any information desired regarding the operation of any particular shovel in any kind of work. We have nothing to conceal because the Thew Shovel gives uniformly excellent results.

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of the type shown have the power and durability to work rapidly—efficiently.



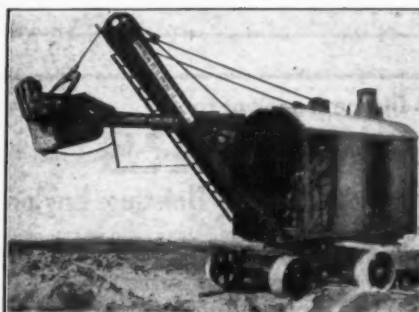
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Complete information in free illustrated catalog.

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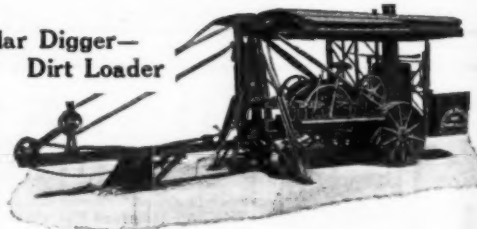
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Street Grader—

Ditch and Cellar Digger—

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all combined in one general utility machine for contractors.

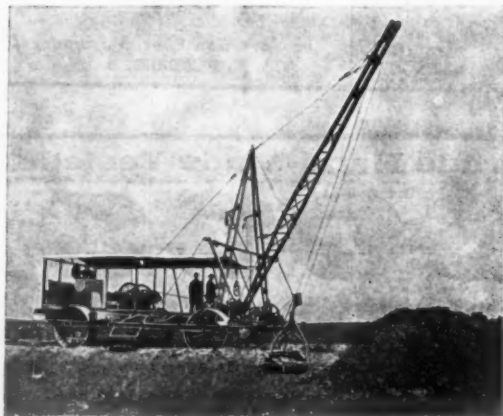
It is light enough (weighs 8 tons) to cross culverts and small bridges safely; self-moving over steep and hilly roads; easily operated and low priced. Descriptive Bulletin on request.

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To the man who has

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do, this book would be both valuable  
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It is free to any Engineer or  
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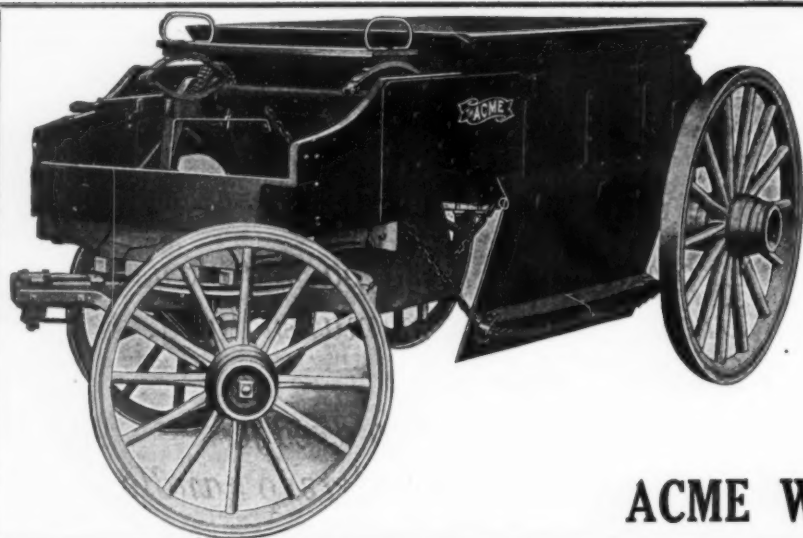
What We Do It With

Take note of the fact that we were not obliged to go into the tramway business. We were not already in it—had no investment to protect. We came into it from the outside—not the inside. Our spirit was critical—far more critical than that of the non-professional purchaser. We took over the Lawson Tramway, therefore, because we saw in it the fundamentals of a complete reorganization and expansion of the Short-Haul scheme and foresaw the founding thereon of a great business. We are not disappointed.

Very respectfully,

**AMBURSEN COMPANY, (Tramway Department)**  
61 Broadway, New York





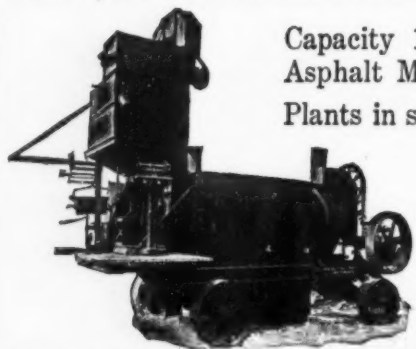
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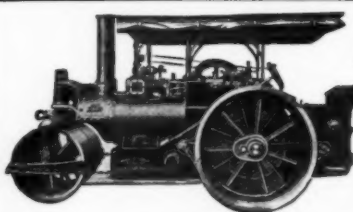


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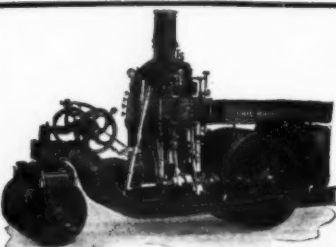


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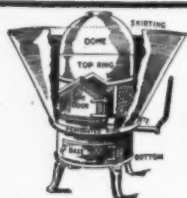
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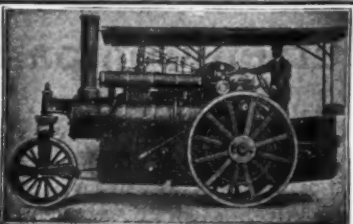
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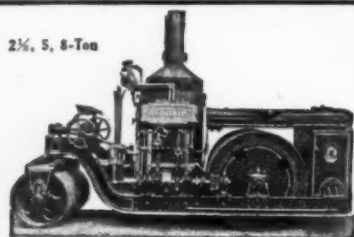
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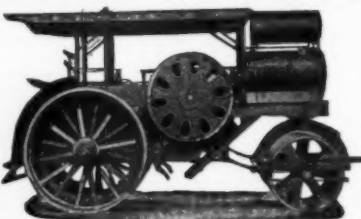
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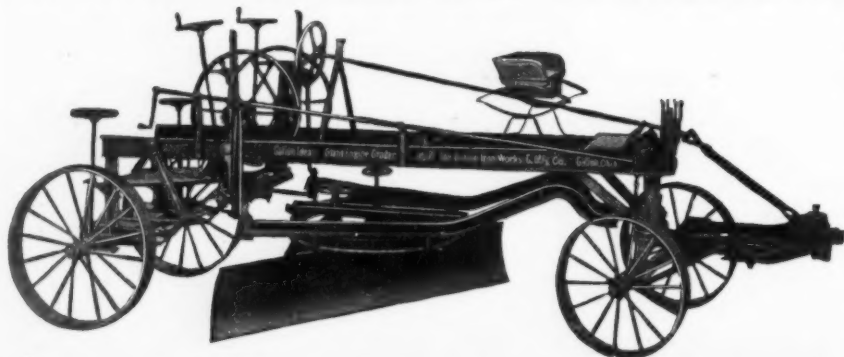
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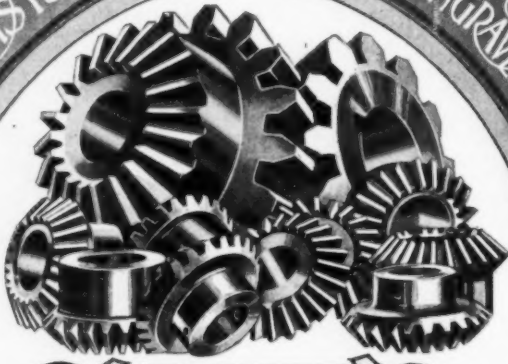
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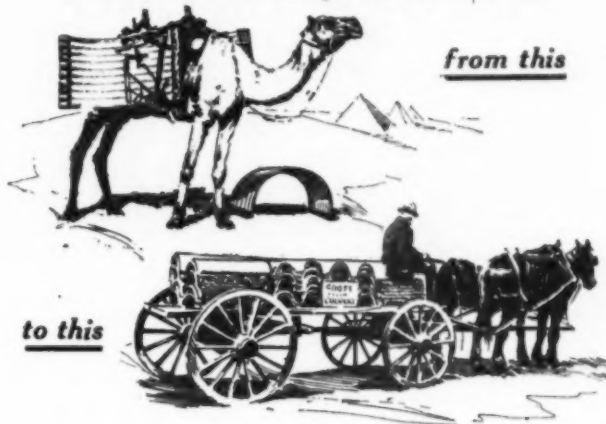


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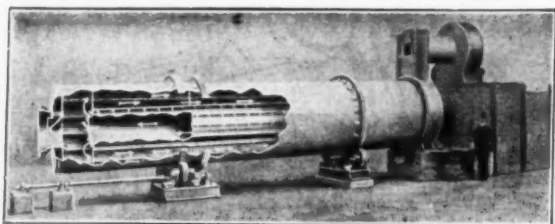
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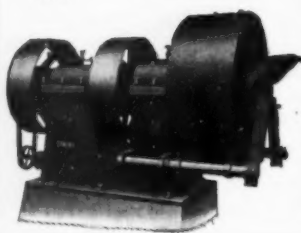
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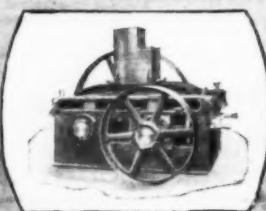
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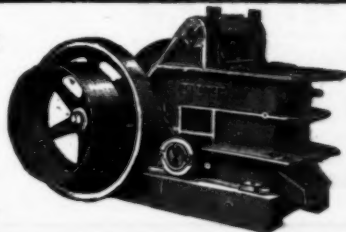
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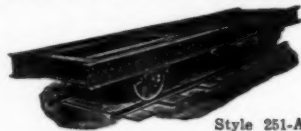
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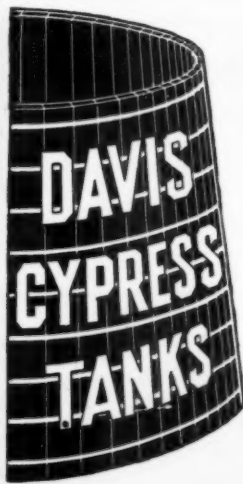
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## What We Offer You

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For this reason their Industrial and Agricultural Department is maintained. Its co-operation is offered in every way possible to the homeseeker who will investigate the opportunities of the South; every assistance is extended which will enable him to find the location where are the home conditions he desires and which will give him prosperity. Immigration agents will advise with him. The information about lands, crops and the various sections and conditions along the roads, carefully collected by the companies, is at his command. Careful attention will be given to secure for him the special information desired on particular subjects or localities. Booklets and other printed matter will be sent on application.

After the homeseeker is located, trained and practical agricultural field agents, live stock, dairy and poultry agents familiar with local conditions will be at his service in solving any of the problems which his new location may bring. Market agents will help him to find the best market for his products.

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We offer our services in behalf of a territory reached by nearly 10,000 miles of railway, the people of that territory and a company which is earnestly at work in co-operation with every person or interest affected to build up the territory and advance the fortunes of those who are developing the lands and the many opportunities in the South.

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# Wide Range of Opportunities

for the

## Investor, Manufacturer or Farmer

The section of the country through which the Carolina, Clinchfield & Ohio Railroad runs presents opportunities for manufacturing and other industrial enterprises so vast and varied in proportions and in form that the man who visits it for the first time is certain to be astounded at the unsuspected possibilities uncovered to his view.

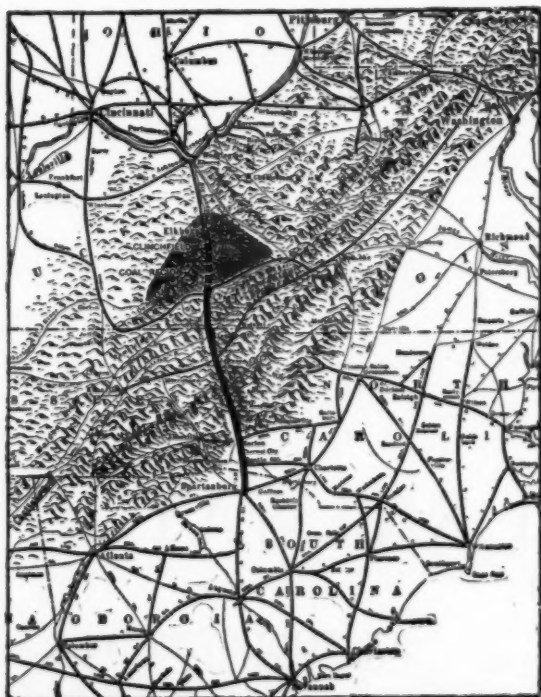
In mining there is coal, iron, feldspar, kaolin, barytes, limestone, and a number of other minerals of greater or less importance, and all in such quantities as to create a promising field for profit.

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In cotton manufacturing there are many opportunities, for in no other section can the raw cotton be brought so cheaply into touch with cheap coal, an abundance of water power, and an unlimited amount of high-class native labor.

For agriculture all kinds of staple crops—grains, grasses—grow prolifically, while cabbage, potatoes, beans and other vegetables produce most abundantly. Apples and peaches here reach their highest state of perfection, and the orchard is destined to become the most profitable portion of the farm.

Cattle raising is found to be profitable wherever tried, and some of the finest horses and mules grown in the country have been bred and matured in this general section.



*Write for our booklet, "The Land of Opportunities," and you will find further particulars concerning the things mentioned here.*

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**"THE ROAD OF OPPORTUNITY"**

R. F. BREWER, Industrial Agent

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## "The Promised Land of Health and Prosperity" is Florida

Between 1900 and 1910 the population of the United States increased .....	21 %
During the same period the population of Florida increased .....	42.4%
The increase in value of farm lands in the United States between 1900 and 1910 was .....	118 %
The gain in Florida during the same years was .....	203 %
The value of Florida's 12 leading diversified crops common to most of the country (and not including the citrus crops, so large a factor in the agricultural interests of this State) increased from \$6,677,000 in 1899 to \$15,104,000 in 1910, a gain of .....	126 %
The gain in the whole country for the same crops was .....	81.1%
Between 1900 and 1909 capital invested in factories increased in the whole country .....	108.8%
In Florida the rate of gain was .....	152.6%
The value of factory products increased during the same time in the United States .....	81.7%
The value of factory products in Florida increased .....	112.7%

In each of these comparisons the rate of increase in Florida was far greater than that of the entire country during the same period.

These remarkable illustrations of well-rounded progress combine to emphasize the wonderful agricultural and industrial activities and possibilities of the State.

This growth, while showing a great percentage of increase in the last decade, has been a steadily advancing one; and when the many large undertakings that are under way in Florida, such as the draining of the Everglades, extension of railroads, developing of new farming and trucking areas, etc., are considered, all of which will open up opportunities of even wider magnitude, a much greater advance can be safely predicted for the next ten years.

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The most perfect all-the-year-round climate to be found in America;  
Manufacturing and agricultural advantages of vast and varied extent;  
Transportation facilities that are rapidly being extended to meet the  
ever expanding business of the State.

Florida is the State.

Active, energetic, live people want to live in an active, energetic, live community, where the tide of incoming population gives every man a chance to develop every latent power in him.

Florida is the place.

### FLORIDA EAST COAST RAILWAY

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The Progressive Railway of the South

Announces the Establishment of Attractive Round-Trip Homeseekers' Rates to Progressive Florida.

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		On FIRST and THIRD TUES- DAYS in each month.	On FIRST and THIRD TUES- DAYS in each month.
TO		TICKETS GOOD FOR 21 DAYS	
NORTH FLORIDA			
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Lake City.....			
McClenny.....		\$22.65	\$27.10
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Quincy.....		24.55	25.60
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Ocala.....	}		
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Oveido.....		25.00	30.00
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These tickets will be on sale at Washington, D. C. and Cincinnati, Ohio, on FIRST and THIRD TUESDAYS in each month—good for 21 days. You can stop at Jacksonville, Florida's greatest city. It will repay you. Stop-overs also south of Jacksonville going and returning.

The rates and service from the Nation's Capital, WASHINGTON, offers splendid opportunity to the people from the Eastern States to make a Florida trip cheaply and comfortably.

The CINCINNATI rates offer a similar opportunity to the people of the Central States. You can find attractive openings in the progressive State of Florida. We shall be glad to answer your inquiry for complete information.

## SEABOARD AIR LINE RAILWAY

The Progressive Railway of the South

J. A. PRIDE, General Industrial Agent

NORFOLK, VIRGINIA



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De La Vergue Machine Co., New York, N. Y.  
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Sirtine, J. E., Greenville, S. C.

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Dietrich Brothers, Baltimore, Md.  
Schreiber & Sons Co., The, Cincinnati, O.  
Snead Architectural Iron Wks., Louisville, Ky.

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Babbitt Metal. [See Anti-Friction Metal.]

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American Cretaceous Works, New Orleans, La.

## Block Fillers

Barber Asphalt Paving Co., Philadelphia, Pa.  
Barrett Mfg. Co., Phila., Pa.  
Standard Oil Co., Newark, N. J.  
U. S. Asphalt Refining Co., New York, N. Y.

## Blowers and Exhaust Fans.

American Blower Co., Detroit, Mich.  
Buffalo Forge Co., Buffalo, N. Y.  
General Electric Co., Schenectady, N. Y.  
Green Fuel Economizer Co., Matineawan, N. Y.  
Raymond Bros. Impact Pulp Co., Chicago, Ill.  
South Atlantic Blow Pipe & Sheet Metal Co., Savannah, Ga.  
Sturtevant Co., B. F., Hyde Park, Boston, Mass.

## Blueprinters.

Childrey Co., Richmond, Va.

## Boilers.

Babcock & Wilcox Co., New York, N. Y.  
Cameron & Barkley Co., Charleston, S. C.  
Ossey-Hedges Co., Chattanooga, Tenn.  
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
Chicago House Wrecking Co., Chicago, Ill.  
Coatesville Boiler Works, Coatesville, Pa.  
Cole Mfg. Co., R. D., Newnan, Ga.  
Hartley Boiler Works, Montgomery, Ala.  
Keebler Co., E., Williamsport, Pa.  
Keystone Boiler & Foundry Co., Columbia, Pa.  
Lookout Boiler & Mfg. Co., Chattanooga, Tenn.  
Lombard Iron Works, Augusta, Ga.  
Mecklenburg Iron Works, Charlotte, N. C.  
Murray Iron Works, Burlington, Ia.  
Phoenix Iron Works Co., Meadville, Pa.  
Schofield Iron Works, Macon, Ga.  
Southern Engine & Boiler Works, Jackson, Tenn.  
Southern Boiler & Tank Works, Memphis, Tenn.  
Valh & Murdoch Iron Works, Charleston, S. C.  
Vogt Machine Co., Henry, Louisville, Ky.  
Walsh & Weidner Boiler Co., Chattanooga, Tenn.  
Zelnicke Supply Co., Walter A., St. Louis, Mo.

## Boiler Covering.

Chesapeake Roofing & Pipe Covering Co., Inc., Baltimore, Md.

## Boiler Graphite.

Dixon Crucible Co., Joseph, Jersey City, N. J.

## Boiler Tubes. [See Tubes, Boiler.]

Bolts, Nuts, Rivets, Studs and Washers.

Progressive Mfg. Co., Torrington, Conn.  
Reunite Iron & Steel Co., Youngstown, O.  
Upson Nut Co., The, Cleveland, O.

## Bonds. (Surety, etc.)

Fidelity & Deposit Co. of Baltimore, Baltimore, Md.

## Bottling Outfits.

Vitler Mfg. Co., Milwaukee, Wis.

## Brass Goods.

Bailey-Leiby Co., Charleston, S. C.  
Buckeye Iron & Brass Works, Dayton, O.  
Lunkenheimer Co., The, Cincinnati, Ohio.  
Powell Co., Wm., Cincinnati, O.

## Brass Railings and Grilles.

Newman Mfg. Co., Cincinnati, Ohio

## Brewers' Machinery.

Vitler Mfg. Co., Milwaukee, Wis.

## Brick. (Acid.)

Hood Brick Co., B. Mifflin, Atlanta, Ga.

## Brick. (Building.)

Am. Enamelled Brick & Tile Co., New York, N. Y.  
Hood Brick Co., B. Mifflin, Atlanta, Ga.  
Hydraulic Press Brick Co., St. Louis, Mo.  
Kingport Brick Corp., Johnson City, Tenn.  
Scott Brick Co., Alex. A., Knoxville, Tenn.  
Standard Brick Co., Macon, Ga.

## Brick. (Enamelled.)

Am. Enamelled Brick & Tile Co., New York, N. Y.

## Brick. (Fire.)

Killian Fireproofing & Brick Works, Killian, S. O.  
Louisville Fire Brick Works, Highland Park, Ky.  
Mexico Brick & Fire Clay Co., Mexico, Mo.  
Pomona Terra-Cotta Co., Pomona, N. O.  
Standard Brick Co., Macon, Ga.  
Stevens' Sons Co., H., Macon, Ga.  
Union Mining Co., Mt. Savage, Md.

## Brick. (Paving.)

Carlyle Paving Brick Co., Portsmouth, O.  
Copeland-Ingles Shale Brick Co., Birmingham, Ala.  
Dunn Wire-Out-Lag Brick Co., Conneaut, Ohio.  
Southern Clay Mfg. Co., Chattanooga, Tenn.  
Standard Brick Co., Macon, Ga.

## Brick and Clayworking Machinery and Supplies.

Chase Fdry. & Mfg. Co., Columbus, O.  
Fornholt Brick Machinery Co., St. Louis, Mo.  
Freese & Co., E. M., Gallion, O.  
Steele & Sons, J. C., Statesville, N. C.

## Bridges. (Concrete.)

Cunningham Construction Co., Shreveport, La.  
Luten, Daniel B., Indianapolis, Ind.  
Requarth Co., O. W., Charlotte, N. C.  
Turner, O. A. P., Minneapolis, Minn.

## Bridges. (Rolling Lift.)

Scherzer Rolling Lift Bridge Co., Chicago, Ill.

## Bridges. (Steel.)

American Bridge Co. of New York, N. Y.  
Belmont Iron Works, Philadelphia, Pa.  
Case Crane & Engineering Co., Columbus, Ohio.  
Champion Bridge Co., Wilmington, Ohio.  
Chicago Bridge & Iron Works, Chicago, Ill.  
Cunningham Construction Co., Shreveport, La.  
East St. Louis Bridge Co., East St. Louis, Ill.  
Richmond Structural Steel Co., Richmond, Va.  
Scherzer Rolling Lift Bridge Co., Chicago, Ill.  
Vincennes Bridge Co., Vincennes, Ind.  
Virginia Bridge & Iron Co., Roanoke, Va.

## Bridge and Structural Iron Paints.

Chattanooga Paint Co., Chattanooga, Tenn.

## Bridge Builders. (Timber.)

Murray & Co., Inc., W. D., Norfolk, Va.

## Brimstones.

Union Sulphur Co., New York, N. Y.

## Buckets. (Clam Shell.)

Hayward Company, New York, N. Y.  
Williams Company, G. H., Cleveland, Ohio.

## Buckets. (Orange Peel.)

Hayward Co., The, New York, N. Y.

## Buckets. (Dredging, Excavating, Sewer, etc.)

Hayward Co., New York, N. Y.  
Monaghan Mch. Co., Chicago, Ill.  
Williams Co., The G. H., Cleveland, O.

## Buckets. (Grab.)

Hunt Co., Inc., O. W., West New Brighton, N. Y.

## Buckets. (Ore Handling.)

Caldwell & Son Co., H. W., Chicago, Ill.  
Hayward Co., New York, N. Y.  
Williams Co., The G. H., Cleveland, O.

## Buhr Stones.

Starr Co., B. F., Baltimore, Md.

## Builders and Contractors.

Interstate Const. Co., Louisville, Ky.  
Stone & Webster Eng. Corp., Boston, Mass.  
Turner, O. A. P., Minneapolis, Minn.  
White Companies, J. G., New York, N. Y.

## Building Stone

Atlantic Stone Co., Atlanta, Ga.  
Bedford Steam Stone Works, Bedford, Ind.

## Building Supplies.

Chicago House Wrecking Co., Chicago, Ill.  
Southern Building Material Co., Norfolk, Va.

## Burners. (Oil.) [See Fuel Oil Equipments.]

## Bushings. (Oilless, for Loose Pulleys.)

Metaline Co., Long Island City, N. Y.

## Cables.

Broderick & Bascom Rope Co., St. Louis, Mo.  
Roebbing's Sons Co., John A., Trenton, N. J.

## Cables. (Underground.)

Safety Insulated Wire & Cable Co., New York, N. Y.

## Cables and Wires. (Insulated.)

American Steel & Wire Co., Chicago, Ill.  
Safety Insulated Wire & Cable Co., New York, N. Y.

## Cableways. (Overhead Suspension.)

Ambrusen Co. (Tramway Department, New York, N. Y.)

## Can and Box Making Machinery. (Tin.)

Ans Machine Co., Max, Mt. Vernon, N. Y.  
Hiles Co., E. W., Brooklyn, N. Y.

## Canning Machinery and Supplies.

Robins & Co., A. K., Baltimore, Md.  
Sprague Canning Machinery Co., Chicago, Ill.

## Carborundum Paper and Cloth.

Carborundum Co., Niagara Falls, N. Y.

## Cars. (Dump, Industrial, Logging and Mine.)

Austin Mfg. Co., Chicago, Ill.  
Chase Fdry. & Mfg. Co., Columbus, O.  
Cord, Geo. B., Cincinnati, Ohio.  
Electric Wheel Co. (Mfrs.), Quincy, Ill.  
Georgia Car & Locomotive Co., Atlanta, Ga.  
Hunt Co., O. W., Inc., West New Brighton, N. Y.  
Kilbourne & Jacobs Mfg. Co., Columbus, Ohio.  
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.  
Western Wheel Scraper Co., Aurora, Ill.

## Cars. (Passenger and Freight.) [See Railroad Equipment and Supplies.]

## Car Unloaders.

Bonney Supply Co., Rochester, N. Y.

## Car Wheels, Axles and Trucks.

Carnegie Steel Co., Pittsburgh, Pa.  
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.

## Cast Iron Pipe. (See Pipe.) [Cast Iron.]

Castings. (Aluminum.)  
Aluminum Company of America, Pittsburgh, Pa.

## Castings. (Brass and Bronze.)

McKenna Bros. Brass Co., Pittsburgh, Pa.  
Triumph Electric Co., Cincinnati, O.

## Castings. (Gray Iron.)

Columbian Iron Works, Chattanooga, Tenn.  
Georgia Car & Locomotive Co., Atlanta, Ga.  
Glenwood Pipe & Foundry Co., Lynchburg, Va.  
Hull's Sons, D. F., Hagerstown, Md.  
Phoenix Iron Works Co., Meadville, Pa.  
U. S. Cast Iron Pipe & Fdry. Co., Burlington, N. J.  
Valh & Murdoch Iron Works, Charleston, S. C.  
Westbrook Elevator Co., Danville, Va.

## Castings. (Malleable Iron and Steel.)

Columbus Malleable Iron Co., Columbus, Ohio.  
General Malleable Co., Warren, O.  
Marion Malleable Iron Works, The, Marion, Ind.  
Missouri Malleable Iron Co., East St. Louis, Ill.

## Castings. (Steel.)

Crucible Steel Castings Co., Lansdowne, Pa.  
Hoffman & Co., Inc., R. O., Baltimore, Md.  
Phoenix Iron Works Co., Meadville, Pa.  
Riverside Steel Casting Co., Newark, N. J.

## Ceilings. (Metal.)

Edwards Manufacturing Co., Cincinnati, O.  
Keighley Metal Cell. & Mfg. Co. S., Pittsburgh, Pa.

## Cement.

Clinchfield Portland Cem. Corp., Kingsport, Tenn.  
Dixie Portland Cement Co., Chattanooga, Tenn.  
Hartman Cement Co., Wm. G., Philadelphia, Pa.  
Kirkpatrick Sand & Cement Co., Birmingham, Ala.  
Kosmos Portland Cement Co., Inc., Louisville, Ky.  
Lehigh Portland Cement Co., Allentown, Pa.  
Southern States Portland Cem. Co., Rockmart, Ga.  
Standard Portland Cement Co., Leeds, Ala.

## Cement Machinery.

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Power & Mining Machinery Co., Cudahy, Wis.  
Raymond Bros. Impact Pulp Co., Chicago, Ill.

## Chains. (Dredge, Quarry, Steam Shovel.)

Welmer Chain & Iron Co., Lebanon, Pa.

## Chemists. (Analytical and Consulting.)

Davis, Geo. C., Philadelphia, Pa.  
Froehling & Robertson, Richmond, Va.  
Hunt & Co., Robt. W., Chicago, Ill.  
Little Inc., A. D., Boston, Mass.  
Meade, Richard K., Baltimore, Md.  
Pittsburgh Testing Laboratory, Pittsburgh, Pa.  
Wiley & Co., Baltimore, Md.

## Chord Accumulator.

Electric Storage Battery Co., The, Philadelphia, Pa.

## Chucks.

More Twist Drill & Mch. Co., New Bedford, Mass.

- Contractors (Drainage).**  
Globe Dredging Co., Savannah, Ga.  
Thompson & Mosely, Inc., Greensboro, N. C.
- Contractors. (Dredging)**  
Globe Dredging Co., Savannah, Ga.
- Contractors. (Hydro-Electric Developments.)**  
Requarth Co., O. W., Charlotte, N. C.
- Contractors. (Water Supply.)**  
Layne & Bowler Co., Houston, Tex.
- Contractor's Machinery and Supplies. [See also Hoisting Machinery.]**  
American Clay Machinery Co., The, Bucyrus, Ohio.  
Austin Mfg. Co., Chicago, Ill.  
Bryer Mach. Co., The John F., Ravenna, O.  
Card, Geo. B., Cincinnati, O.  
Flory Mfg. Co., S., Bangor, Pa.  
Marine Metal & Supply Co., New York, N. Y.  
Milburn Co., Alex. N., Baltimore, Md.  
Monaghan Mch. Co., Chicago, Ill.  
National Hoisting Engine Co., Harrison, N. J.  
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.  
Shawwood, E. G., New York, N. Y.  
Starling Machinery Co., New York, N. Y.  
Thaw & Williams, Cincinnati, Ohio.
- Conveying and Elevating Machinery.**  
Amberson Co., (Tramway Department), New York, N. Y.  
Bartlett & Snow Co., O. O., Cleveland, O.  
Caldwell & Son Co., H. W., Chicago, Ill.  
Flory Mfg. Co., S., Bangor, Pa.  
Guarantee Construction Co., New York, N. Y.  
Hunt Co., G. W., Inc., West New Brighton, N. Y.  
Jeffrey Mfg. Co., Columbus, O.  
Lidgerwood Mfg. Co., New York, N. Y.  
Mathews Gravity Carrier Co., Ellwood City, Pa.  
McLennan-Stone Mach. Co., Hollidaysburg, Pa.  
Weller Mfg. Co., Chicago, Ill.
- Cooperage Stock and Box Shook Machinery.**  
Gerlach Co., Peter, Cleveland, O.
- Cordage.**  
Broderick & Bascom Rope Co., St. Louis, Mo.  
Columbian Rope Co., Auburn, N. Y.  
Waterbury Co., New York, N. Y.
- Core Drilling.**  
Sprague & Henwood, Inc., Scranton, Pa.
- Corn-Mill Machinery.**  
Raymond Bros. Impact Pulv. Co., Chicago, Ill.  
Hart Co., R. F., Baltimore, Md.  
Wolf Co., Chambersburg, Pa.
- Cotton Oil and Products.**  
American Cotton Oil Co., New York, N. Y.
- Cotton Yarns. (Commission Merchants.)**  
Paulson, Linkroom & Co., New York, N. Y.
- Cotton-Gin Machinery.**  
Carrar Cotton Gin Co., East Bridgewater, Mass.  
Continental Gin Co., Birmingham, Ala.  
Murray Co., The, Atlanta, Ga.
- Cotton-Mill Machinery.**  
Crompton & Knowles Loom Works, Worcester, Mass.  
Draper Co., Hopedale, Mass.  
Mason Machine Works, Taunton, Mass.  
Saco-Lowell Shop, Boston, Mass.  
Whitinsville Spin'g Ring Co., Whitinsville, Mass.
- Cotton-Mill Supplies.**  
American Supply Co., Providence, R. I.  
Crompton & Knowles Loom Works, Worcester, Mass.  
Whitinsville Spin'g Ring Co., Whitinsville, Mass.
- Cottonseed-Oil Machinery.**  
Buckeye Iron & Brass Works, Dayton, O.  
Burruss Engineering Co., Atlanta, Ga.  
Cardwell Machine Co., Richmond, Va.  
Carver Cotton Gin Co., East Bridgewater, Mass.  
Continental Gin Co., Birmingham, Ala.  
French Oil Mill Machinery Co., Piqua, O.  
Murray Co., The, Atlanta, Ga.  
Platt Iron Works Co., Dayton, Ohio.  
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
- Couplings.**  
American Spiral Pipe Works, Chicago, Ill.  
Golden's Foundry & Machine Co., Columbus, Ga.  
Wood's Sons Co., T. B., Chambersburg, Pa.
- Couplings. (Car.)**  
Weimer Chain & Iron Co., Lebanon, Pa.
- Couplings. (Hose, Air, Gas, Steam and Water.)**  
National Tube Co., Pittsburgh, Pa.
- Coverings. (Pipe, Boiler, etc.)**  
Johns-Manville Co., H. W., New York, N. Y.  
Southern Asbestos Mfg. Co., Inc., Richmond, Va.
- Cranes. (Locomotive.)**  
Ohio Locomotive Crane Co., Bucyrus, O.
- Cranes. (Traveling, Hand, Power, Hydraulic.)**  
Osce Crane & Engineering Co., Columbus, Ohio.  
Speidel, J. G., Reading, Pa.
- Crayons.**  
Georgia Talc Co., Asheville, N. C.  
Lowell Grayon Co., Lowell, Mass.
- Cresosoting Equipment.**  
Case-Hedges Co., Chattanooga, Tenn.  
Struthers-Wells Co., Warren, Pa.  
Walsh & Weller Boiler Co., Chattanooga, Tenn.
- Cresosoting Works.**  
American Cresosote Works, New Orleans, La.  
Internat'l Cresosoting & Cons. Co., Galveston, Tex.  
National Lumber & Cresos. Co., Texarkana, Ark.  
Southern Cresosoting Co., Ltd., Slidell, La.  
Southern Paving Const. Co., Chattanooga, Tenn.  
Southern Wood Preserving Co., Atlanta, Ga.
- Crossarms and Pins.**  
Western Electric Co., New York, N. Y.
- Crossarms. (Cresosoted.)**  
American Cresosote Wks., New Orleans, La.  
Internat'l Cresosoting & Cons. Co., Galveston, Tex.  
National Lumber & Cresos. Co., Texarkana, Ark.  
Southern Cresosoting Co., Ltd., Slidell, La.  
Southern Paving Const. Co., Chattanooga, Tenn.  
Southern Wood Preserving Co., Atlanta, Ga.
- Crossings. [See Railroad Frogs and Switches.]**
- Crosstie Machine.**  
Standard Portable Saw Mill Co., New Orleans, La.
- Crossties. (Cresosoted.)**  
American Cresosote Works, New Orleans, La.  
Internat'l Cresosoting & Cons. Co., Galveston, Tex.  
National Lumber & Cresos. Co., Texarkana, Ark.  
Southern Cresosoting Co., Ltd., Slidell, La.  
Southern Paving Const. Co., Chattanooga, Tenn.  
Southern Wood Preserving Co., Atlanta, Ga.
- Crossties. (Steel.)**  
Carnegie Steel Co., Pittsburgh, Pa.
- Crushed Stone. (Road Concrete and Ballast.)**  
American Ballast Co., Knoxville, Tenn.  
Atlantic Stone Co., Atlanta, Ga.  
Bald Mountain Quarry, Newsum, N. C.  
Chickamauga Quarry & Construction Co., Chattanooga, Tenn.  
Kirkpatrick Sand & Cement Co., Birmingham, Ala.  
Western Brookier Quarry Co., Columbia, S. C.
- Crushers. (Corn and Cob.)**  
Graunder Pat. Crusher & Pulv. Co., St. Louis, Mo.  
Jeffrey Mfg. Co., Columbus, O.  
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
- Crushers. (Rock.)**  
Austin Mfg. Co., Chicago, Ill.  
Buchanan Co., Inc., C. G., New York, N. Y.  
Chalmers & Williams, Chicago Heights, Ill.  
Foster & Mining Machinery Co., Oudash, Wis.  
Raymond Bros. Impact Pulv. Co., Chicago, Ill.  
Universal Road Mch. Co., Kingston, N. Y.  
Western Wheeled Scraper Co., Aurora, Ill.
- Crushing and Pulverizing Machinery.**  
Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
Austin Mfg. Co., Chicago, Ill.  
Bartlett & Snow Co., O. O., Cleveland, O.  
Buchanan Co., Inc., C. G., New York, N. Y.  
Chalmers & Williams, Chicago Heights, Ill.  
Graunder Pat. Crusher & Pulv. Co., St. Louis, Mo.  
Jeffrey Mfg. Co., Columbus, O.  
McLennan-Stone Mach. Co., Hollidaysburg, Pa.  
Raymond Bros. Impact Pulv. Co., Chicago, Ill.  
Stedman's Foundry & Machine Works, Aurora, Ind.  
Western Wheeled Scraper Co., Aurora, Ill.
- Culvert Pipe. (Cast Iron.)**  
American Cast Iron Pipe Co., Birmingham, Ala.  
American Pipe & Foundry Co., Philadelphia, Pa.  
Clow & Sons, James B., Chicago, Ill.  
Donaldson Iron Co., Emaus, Pa.  
Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
Lynchburg Foundry Co., Lynchburg, Va.  
Massillon Iron & Steel Co., Massillon, Ohio.  
U. S. Cast Iron Pipe & Fdy. Co., Burlington, N. J.  
Wood & Co., R. D., Philadelphia, Pa.
- Culverts. (Corrugated Metal.)**  
American Sheet & Tin Plate Co., Pittsburgh, Pa.  
Armco Culvert Publicity Bureau, Cincinnati, O.  
Atlas Metal Works, Joliet, Ill.  
Canton Culvert and Silo Co., The, Canton, O.  
Dixie Culvert & Metal Co., Atlanta, Ga.  
Fouts Co., C. C., Middletown, O.  
Gallon Iron Works & Mfg. Co., The, Gallatin, Ohio.  
Lone Star Culvert Co., Houston, Tex.  
National Corrugated Culvert Mfg. Co., Warren, Pa.  
Newport Culvert Co., Inc., Newport, Ky.  
Salisbury Metal Culvert Co., Salisbury, N. C.  
Tennessee Metal Culvert Co., Nashville, Tenn.  
Virginia Metal Culvert Co., Inc., Roanoke, Va.
- Culverts. (Vitrified Pipe.)**  
Southern Sewer Pipe Co., Birmingham, Ala.  
Stevens Sons Co., H., Macon, Ga.
- Curb Protector. (Steel.)**  
Steel Protected Concrete Co., Philadelphia, Pa.
- Cutter Grinders.**  
Vitrified Wheel Co., Westfield, Mass.
- Cutting. (Oxy-Acetylene Process.)**  
Prest-O-Lite Co., Inc., The, Indianapolis, Ind.
- Cuts. (Half Tone, Line, etc.)**  
Alpha Photo Engraving Co., Balto. Md.  
Baltimore-Maryland Engraving Co., Baltimore, Md.
- Derricks and Derrick Fittings.**  
Byers Mach. Co., The John F., Ravenna, O.  
Hayward Co., The, New York, N. Y.  
Monaghan Machine Co., Chicago, Ill.
- Designers and Illustrators. (Printed Matter.)**  
Alpha Photo Engraving Co., Baltimore, Md.  
Baltimore-Maryland Engraving Co., Baltimore, Md.
- Diamond Core Drilling.**  
Sprague & Henwood, Inc., Scranton, Pa.
- Disposal Plants. (Garbage Incinerators.)**  
Stacy-Bates Co., Minneapolis, Minn.
- Ditching Machinery.**  
American Steel Dredge Co., Fort Wayne, Ind.  
Bay City Dredge Works, Bay City, Mich.  
Economy Excavator Co., Iowa Falls, Iowa.  
Fairbanks Steam Shovel Co., Marion, O.  
Hayward Co., The, New York, N. Y.  
Marion Steam Shovel Co., Marion, O.  
New Automatic Shovel Co., Lorain, Ohio.  
Williams Co., The, G. H., Cleveland, O.
- Doors. (Steel Rolling.)**  
Kinneer Mfg. Co., Columbus, O.  
Van Harlingen, J. M., Atlanta, Ga.
- Doors. (Tin Clad.)**  
Victor Mfg. Co., Newburyport, Mass.
- Double Seamers.**  
Ams Machine Co., Max, Mt. Vernon, N. Y.
- Draftsman.**  
Childrey Co., Richmond, Va.
- Draftsmen's Supplies.**  
Weber & Co., F., Philadelphia, Pa.
- Dredging Contractors. [See Contractors (Dredging).]**
- Dredge Chains.**  
Weimer Chain & Iron Co., Lebanon, Pa.
- Dredges. [See Excavating Machinery.]**
- Drills. (Pneumatic.) [See also Drills Rock and Mining.]**
- Drills. (Prospecting.)**  
Keystone Steam Well Mach. Co., Beaver Falls, Pa.
- Drills. (Rock and Mining.)**  
Jeffrey Mfg. Co., Columbus, O.  
Sullivan Mchry. Co., Chicago, Ill.
- Drills. (Twist.)**  
McKenna Bros. Brass Co., Pittsburgh, Pa.  
Morris Twist Drill & Mch. Co., New Bedford, Mass.
- Drive Well Points and Well Supplies.**  
National Tube Co., Pittsburgh, Pa.
- Drop Forgings.**  
American Spiral Pipe Works, Chicago, Ill.
- Drop Forging Machinery.**  
Bliss Co. E. W., Brooklyn, N. Y.
- Dryers. (Sand.) [See Sand Dryers.]**
- Dry Decks. (Builders of)**  
American Bridge Co. of New York, N. Y.
- Drying Machinery.**  
American Process Co., New York, N. Y.  
Bailey-Lobby Co., The, Charleston, S. C.  
Buffalo Forge Co., Buffalo, N. Y.  
Coatesville, Boiler Works, Coatesville, Pa.  
Cummer & Son Co., F. D., The, Cleveland, Ohio.  
Hershey Manufacturing Co., South Boston, Mass.  
Ruggles-Coles Engineering Co., New York, N. Y.  
Storvick Co., B. F., Hyde Park, Boston, Mass.
- Dry Kilns.**  
Buffalo Forge Co., Buffalo, N. Y.  
Moore Dry Kiln Co., L., Jacksonville, Fla.
- Dry Kiln Equipment.**  
Moore Dry Kiln Co., L., Jacksonville, Fla.
- Dumbwaiters. (Hand Power.)**  
McKenna Bros. Brass Co., Pittsburgh, Pa.  
Speidel, J. G., Reading, Pa.
- Dust-Collecting System.**  
Buffalo Forge Co., Buffalo, N. Y.  
King Co., F. E., Norfolk, Va.  
South Atlantic Blow Pipe & Sheet Metal Co., Savannah, Ga.
- Dynamite. (Industrial and Agricultural.)**  
Du Pont Powder Co., Wilmington, Del.  
Keystone Nat'l Powder Co., Emporium, Pa.
- Dynamics and Motors.**  
Assets Purchasing Co., Wheeling, W. Va.  
General Electric Co., Schenectady, N. Y.  
Pan Electric Mfg. Co., St. Louis, Mo.  
Terry Steam Turbine Co., Hartford, Conn.  
Triumph Electric Co., Cincinnati, O.  
Western Electric Co., New York, N. Y.
- Eaves. (Trough.)**  
Edwards Mfg. Co., Cincinnati, O.
- Ejectors. (Sewage.)**  
Lunkenheimer Co., The, Cincinnati, O.  
Pacific Flush Tank Co., New York, N. Y.
- Electric Machinery. (Dynamoes, Generators, Motors, etc.)**  
Allis-Chalmers Manufacturing Co., Milwaukee, Wis.  
American Elevator & Mch. Co., Louisville, Ky.  
Fairbanks-Morse & Co., Atlanta, Ga.  
General Electric Co., Schenectady, N. Y.  
Lee Electric Co., Baltimore, Md.  
Moore & Co., Edgar M., Pittsburgh, Pa.  
Pan Electric Mfg. Co., St. Louis, Mo.  
Piedmont Electric Co., Asheville, N. C.  
Schneider Co., R., Philadelphia, Pa.  
Schroeder Electric Co., Evansville, Ind.  
Sturtevant Co., B. F., Hyde Park Boston, Mass.  
Triumph Electric Co., Cincinnati, O.  
Wilson Mchry. Co., St. Louis, Mo.
- Electrical Contractors, Instruments and Supplies.**  
Economy Fuse & Mfg. Co., Chicago, Ill.  
General Electric Co., Schenectady, N. Y.  
Hill & Co., Walter E., Baltimore, Md.  
Lee Electric Co., Baltimore, Md.  
Lery-Morton Co., Columbus, Ga.  
Piedmont Electric Co., Asheville, N. C.  
Walker Electrical & Plumbing Co., Rome, Ga.
- Electric Light Plants. (Portable.)**  
Schroeder Electric Co., Evansville, Ind.
- Electro-Magnet. [See Magnet Electro.]**
- Elevating, Conveying and Power Transmission Machinery. [See also Conveying and Elevating Machinery and Power Transmission Mchry.]**
- Elevator.**  
ELECTRIC.  
American Electric Machine & Elevator Co., St. Louis, Mo.  
Current Elevator Co., James H., Cincinnati, Ohio.  
Grote Mfg. Co., F., Evansville, Ind.  
K. C. Elevator Mfg. Co., Kansas City, Mo.  
Moffatt Machinery Mfg. Co., Charlotte, N. C.  
Ohio Elevator & Machine Co., Columbus, Ohio.  
Otis Elevator Co., New York, N. Y.  
Speidel, J. G., Reading, Pa.  
Warsaw Elevator Co., Baltimore, Md.  
Westbrook Elevator Co., Danville, Va.
- HAND AND BELT POWER.**  
American Electric Machine & Elevator Co., St. Louis, Mo.  
Current Elevator Co., James H., Cincinnati, O.  
K. C. Elevator Mfg. Co., Kansas City, Mo.  
Moffatt Machinery Mfg. Co., Charlotte, N. C.  
Ohio Elevator & Machine Co., Columbus, Ohio.  
Otis Elevator Co., New York, N. Y.  
Speidel, J. G., Reading, Pa.  
Westbrook Elevator Co., Danville, Va.
- HYDRAULIC.**  
American Electric Machine & Elevator Co., St. Louis, Mo.  
Current Elevator Co., James H., Cincinnati, O.  
K. C. Elevator Mfg. Co., Kansas City, Mo.  
Moffatt Machinery Mfg. Co., Charlotte, N. C.  
Ohio Elevator & Machine Co., Columbus, Ohio.  
Otis Elevator Co., New York, N. Y.  
Speidel, J. G., Reading, Pa.  
Westbrook Elevator Co., Danville, Va.
- STEAM HYDRAULIC.**  
Ridgway & Son Co., The, Coatesville, Pa.
- Elevators. (Automatic.)**  
Mathews Gravity Carrier Co., Ellwood City, Pa.
- Elevators. (Portable for Warehouses, etc.)**  
Economy Engineering Co., Chicago, Ill.
- Elevator Bolts.**  
Upon Nut Co., The, Cleveland, O.
- Elevator Buckets.**  
Caldwell & Son Co., H. W., Chicago, Ill.  
Hendrick Mfg. Co., Carbondale, Pa.  
Jeffrey Mfg. Co., Columbus, O.
- Elevator Enclosures and Cabs.**  
Bolles Iron & Wire Works, J. E., Detroit, Mich.  
Dow Wire & Iron Works, Louisville, Ky.  
Dufur & Co., Baltimore, Md.  
Dufur, Baggot & Co., Baltimore, Md.  
Mayers Mfg. Co., The Fred J., Hamilton, O.  
Ohio Elevator & Machine Co., The, Columbus, O.  
Otis Elevator Co., New York, N. Y.
- Elevator Ropes. [See Wire Ropes.]**
- Elevator Safety Gates.**  
American Elec. Mch. & Elevator Co., St. Louis, Mo.  
Richmond Safety Gate Co., Richmond, Ind.
- Emery Wheels. [See Grinding Wheels.]**
- Engineers.**  
APPRAISAL.  
Atlantic Engineering Co., Savannah, Ga.  
Day & Zimmerman, Philadelphia, Pa.  
Ferree Co., The H. G., Memphis, Tenn.  
Meade, Richard K., Baltimore, Md.  
Weller, Francis R., Washington, D. C.
- BLAST FURNACES.**  
Smythe Co., The S. R., Pittsburgh, Pa.
- BRIDGE.**  
Atlantic Engineering Co., Savannah, Ga.  
Greiner & Whitman, Baltimore, Md.  
Grimmer & Toussaint, Tampa, Fla.  
Martin Co. A. J., Portsmouth, Ohio.
- CHEMICAL.**  
Croby, Walter W., Baltimore, Md.  
Institute of Industrial Research, Washington, D. C.  
Kimball, Herbert S., Boston, Mass.  
Little, Inc. A. D., Boston, Mass.  
Meade, Richard K., Baltimore, Md.  
Pittsburgh Testing Laboratory, Pittsburgh, Pa.
- CIVIL.**  
Arnold Co., The, Chicago, Ill.  
Brown & Clarkson, Washington, D. C.  
Farmer, H. G., Memphis, Tenn.  
Grimmer & Toussaint, Tampa, Fla.  
Hogus Engineering Ass'n., Charleston, W. Va.  
Knowles, Morris, Pittsburgh, Pa.  
Moite, H. E., New York, N. Y.  
Pain & Young, Tampa, Fla.  
Renshaw & Breese, Huntington, W. Va.  
Rucker, B. Parks, Chattanooga, Tenn.  
Shand Engineering Co., Columbia, S. C.  
Stevens, Harry, Washington, D. C.  
Thompson & Mosely, Inc., Greensboro, N. C.  
Waco, W., Houston, Tex.  
Walker Engineering Corp., Tampa, Fla.  
White Companies, J. G., New York, N. Y.
- DAMS.**  
Grimmer & Toussaint, Tampa, Fla.  
Martin Co., A. J., Portsmouth, Ohio.  
Quick, Alfred M., Baltimore, Md.  
Requarth Co., O. W., Charlotte, N. C.  
Spiker, William O., Atlanta, Ga.  
Weller, Francis R., Washington, D. C.  
White Companies, J. G., New York, N. Y.
- DOCKS.**  
Greiner & Whitman, Baltimore, Md.
- DRAINAGE AND IRRIGATION.**  
Atlantic Engineering Co., Savannah, Ga.  
Brown & Clarkson, Washington, D. C.  
Dahney Engineering Co., Memphis, Tenn.  
Ford, Bacon & Davis, New York, N. Y.  
Knowles, Morris, Pittsburgh, Pa.  
McCrady Bros. & Cheves, Inc., Charleston, S. C.  
Thompson & Mosely, Inc., Greensboro, N. C.  
Walker Engineering Corp., Tampa, Fla.
- EFFICIENCY.**  
Croby, Walter W., Baltimore, Md.  
Institute of Industrial Research, Washington, D. C.  
Little, Inc. A. D., Boston, Mass.  
Quick, Alfred M., Baltimore, Md.
- ELECTRICAL.**  
Arnold Co., The, Chicago, Ill.  
Graves Engineering Co., Inc., New York, N. Y.  
Hogus Engineering Ass'n., Charleston, W. Va.  
Kelholts, F. O., Baltimore, Md.  
Lery-Morton Co., Columbus, Ga.  
Lide, Martin J., Birmingham, Ala.  
Moite, H. E., New York, N. Y.  
Rucker, B. Parks, Chattanooga, Tenn.  
Stone & Webster Engr. Corp., Boston, Mass.  
Tucker & Laxton, Charlotte, N. C.  
White, Gilbert O., Charlotte, N. C.
- ELECTRIC LIGHT AND POWER PLANTS.**  
Dahney Engineering Co., Memphis, Tenn.  
Ford, Bacon & Davis, New York, N. Y.  
Graves Engineering Co., Inc., New York, N. Y.  
Kelholts, F. O., Baltimore, Md.  
Kelly, Thos. G., Cincinnati, Ohio.  
Lery-Morton Co., Columbus, Ga.  
Martin Co., A. J., Portsmouth, Ohio.  
Scotfield Engineering Co., Philadelphia, Pa.  
Stone & Webster Engr. Corp., Boston, Mass.  
Weller, Francis R., Washington, D. C.  
White Companies, J. G., New York, N. Y.  
White, Gilbert O., Charlotte, N. C.
- Gas.**  
Ford, Bacon & Davis, New York, N. Y.  
Gas Engineering Co., Trenton, N. J.  
Renshaw & Breese, Huntington, W. Va.
- GEOLOGICAL.**  
Brown & Clarkson, Washington, D. C.  
Davis, Geo. O., Philadelphia, Pa.  
Froehling & Robertson, Richmond, Va.  
Grimmer, G. P., Martinsburg, W. Va.  
Hogus Engineering Ass'n., Charleston, W. Va.  
Institute of Industrial Research, Washington, D. C.  
Renshaw & Breese, Huntington, W. Va.
- HYDRO-ELECTRIC.**  
Atlantic Engineering Co., Savannah, Ga.  
Brown & Clarkson, Washington, D. C.  
Graves Engineering Co., Inc., New York, N. Y.  
Greiner & Whitman, Baltimore, Md.  
Howe, Charles F., Macon, Ga.  
Knowles, Morris, Pittsburgh, Pa.  
Quick, Alfred M., Baltimore, Md.  
Requarth Co., O. W., Charlotte, N. C.  
Rucker, B. Parks, Chattanooga, Tenn.  
Scotfield Engineering Co., Philadelphia, Pa.  
Spirr, J. E., Greenville, S. C.  
Spiker, William O., Atlanta, Ga.  
Tucker & Laxton, Charlotte, N. C.  
Weller, Francis R., Washington, D. C.  
White Companies, J. G., New York, N. Y.
- INDUSTRIAL PLANT.**  
Cunningham Construction Co., Shreveport, La.  
Day & Zimmerman, Philadelphia, Pa.  
Ferree Co., The H. G., Memphis, Tenn.  
Gillman, Harry L., Boston, Mass.  
Graves Engineering Co., Inc., New York, N. Y.  
Grimmer & Toussaint, Tampa, Fla.  
Guarantee Construction Co., New York, N. Y.  
Institute of Industrial Research, Washington, D. C.  
Kelly, Thos. G., Cincinnati, Ohio.  
Kimball, Herbert S., Boston, Mass.  
Little, Inc. A. D., Boston, Mass.  
Meade, Richard K., Baltimore, Md.  
Rucker, B. Parks, Chattanooga, Tenn.  
Scotfield Engineering Co., Philadelphia, Pa.  
Shearer, O. E., Memphis, Tenn.  
Stone & Webster Engr. Corp., Boston, Mass.  
Stevens, Harry, Washington, D. C.  
White Companies, J. G., New York, N. Y.
- INSPECTIONS AND TESTS.**  
Croby, Walter W., Baltimore, Md.  
Froehling & Robertson, Richmond, Va.  
Hill, Nicholas S., Jr., and S. F. Ferguson, New York, N. Y.  
Hunt & Co., Robert W., Chicago, Ill.  
Institute of Industrial Research, Washington, D. C.  
Meade, Richard K., Baltimore, Md.  
Pittsburgh Testing Laboratory, Pittsburgh, Pa.
- LANDSCAPE.**  
Berckmans Co., F. J., Augusta, Ga.  
Croby, Walter W., Baltimore, Md.  
Pain & Young, Tampa, Fla.
- LIGHTING.**  
Ford, Bacon & Davis, New York, N. Y.  
McCrady & Co., J. H., Atlanta, Ga.  
Rucker, B. Parks, Chattanooga, N. C.



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## Engineers.

## MECHANICAL.

Arnold Co., The, Chicago, Ill.  
Graves Engineering Co., Inc., New York, N. Y.  
Kelly, Thos. C., Cincinnati, Ohio.  
Lide, Martin J., Birmingham, Ala.  
McLundie, A. S., Chattanooga, Tenn.  
Meade, Richard E., Baltimore, Md.  
Shevens, Harry, Washington, D. C.  
Tucker & Laxton, Charlotte, N. C.

## MINING.

Brown & Clarkson, Washington, D. C.  
Grimsley, G. F., Martinsburg, W. Va.  
Hogue Engineering Ass'n., Charleston, W. Va.  
Jones, E. M., Chattanooga, Tenn.  
Renshaw & Breece, Huntington, W. Va.

## MUNICIPAL.

Anderson & Christie, Charlotte, N. C.  
Brown & Clarkson, Washington, D. C.  
Crooby, Walter W., Baltimore, Md.  
Dabney Engineering Co., Memphis, Tenn.  
Elrod, Henry E., Dallas, Texas.  
Graves Engineering Co., Inc., New York, N. Y.  
Greiner & Whitman, Baltimore, Md.  
Havely, H. B., Monroe, N. C.  
Hogue Engineering Ass'n., Charleston, W. Va.  
Knowles, Morris, Pittsburgh, Pa.  
McCrady Bros. & Obeys, Inc., Charleston, S. C.  
McCrady Co., J. R., Atlanta, Ga.  
Pew, Arthur, Atlanta, Ga.  
Shand Engineering Co., Columbia, S. C.  
Walker Engineering Corp., Tampa, Fla.  
White, Gilbert C., Charlotte, N. C.

## PAVING AND ROAD.

Anderson & Christie, Charlotte, N. C.  
Atlantic Engineering Co., Savannah, Ga.  
Crooby, Walter W., Baltimore, Md.  
Elrod, Henry E., Dallas, Texas.  
Havely, H. B., Monroe, N. C.  
Institute of Industrial Research, Washington, D. C.  
McCrady Bros. & Obeys, Inc., Charleston, S. C.  
Shand Engineering Co., Columbia, S. C.  
White, Gilbert C., Charlotte, N. C.

## PUBLIC SERVICE PROPERTIES.

Day & Zimmerman, Philadelphia, Pa.  
Farroe Co., The H. G., Memphis, Tenn.  
Ford, Bacon & Davis, New York, N. Y.  
Gilman, Harry L., Boston, Mass.  
Graves Engineering Co., Inc., New York, N. Y.  
Scodell Engineering Co., Philadelphia, Pa.  
Stone & Webster Engr. Corp., Boston, Mass.  
Weiler, Francis R., Washington, D. C.  
White Companies, J. G., New York, N. Y.

## REINFORCED CONCRETE. (Bridges, Buildings, etc.)

Cunningham Construction Co., Shreveport, La.  
Foster-Creighton-Gould Co., Nashville, Tenn.  
Guarantee Construction Co., New York, N. Y.  
Interstate Const. Co., Louisville, Ky.  
Luten, Daniel B., Indianapolis, Ind.  
Martin Co., A. J., Portsmouth, Ohio.  
Requarth Co., C. W., Charlotte, N. C.  
Savannah Eng. & Construction Co., Savannah, Ga.  
Spiker, William C., Atlanta, Ga.  
Tucker & Laxton, Charlotte, N. C.  
White Companies, J. G., New York, N. Y.

## RIVER AND HARBOR.

Gilman, Harry L., Boston, Mass.

## SEWERAGE AND WATER-WORKS.

Anderson & Christie, Charlotte, N. C.  
Brown & Clarkson, Washington, D. C.  
Dabney Engineering Co., Memphis, Tenn.  
Ford, Bacon & Davis, New York, N. Y.  
Greiner & Whitman, Baltimore, Md.  
Havely, H. B., Monroe, N. C.  
Hill, Nicholas S., Jr., and S. F. Ferguson, New York, N. Y.  
Knowles, Morris, Pittsburgh, Pa.  
Mayer, J. H., Birmingham, Ala.  
Miller, Hiram Allen, Boston, Mass.  
Myers, E. W., Greensboro, N. C.  
Pew, Arthur, Atlanta, Ga.  
Quick, Alfred M., Baltimore, Md.  
Stevens, Harry, Washington, D. C.  
Walker Engineering Corp., Tampa, Fla.  
White Companies, J. G., New York, N. Y.  
White Gilbert C., Charlotte, N. C.

## STEEL WORK AND ROLLING MILLS.

Smythe Co., The S. R., Pittsburgh, Pa.

## STRUCTURAL STEEL.

Foster-Creighton-Gould Co., Nashville, Tenn.  
Shearer, O. E., Memphis, Tenn.  
Spiker, Wm. C., Atlanta, Ga.  
Renshaw & Breece, Huntington, W. Va.

## THEATRE CONSTRUCTION.

Gatlin, W. R., Hopkinsville, Ky.

## Engines.

## COMPRESSION AIR.

Dake Engine Co., Grand Haven, Mich.

## GAS AND GASOLINE.

Affiliated Manufacturers Co., Milwaukee, Wis.  
Allis-Chalmers Manufacturing Co., Milwaukee, Wis.  
Cooper Co., O. & G., Mt. Vernon, Ohio.  
De La Vergne Machine Co., New York, N. Y.  
Gas Engineering Co., Trenton, N. J.  
Mieta, A., New York, N. Y.  
Portsmouth Engine Co., Portsmouth, O.  
Power Mfg. Co., Lima, Ohio.  
Southern Engine & Boiler Works, Jackson, Tenn.  
Van Dusen, Rags Co., The, Columbus, O.  
Westinghouse Machine Co., The, Pittsburgh, Pa.

## OIL.

Bolinders Co., New York, N. Y.  
Chicago Pneumatic Tool Co., Chicago, Ill.  
De La Vergne Machine Co., New York, N. Y.  
Fairbanks-Morse & Co., Atlanta, Ga.  
Meits, A., New York, N. Y.  
Moore & Sons Corp., Samuel L., Elizabeth, N. J.  
Power Mfg. Co., Lima, Ohio.  
Snow Steam Pump Plant, The, New York, N. Y.

## STEAM.

Allis-Chalmers Manufacturing Co., Milwaukee, Wis.  
Ball Engine Co., Erie, Pa.  
Buffalo Forge Co., Buffalo, N. Y.  
Cameron & Barkley Co., Charleston, S. C.  
Chicago House Wrecking Co., Chicago, Ill.  
Cooper Co., O. & G., Mt. Vernon, O.  
Dake Engine Co., Grand Haven, Mich.  
Griffith & Wedge Co., The, Zanesville, O.  
Houston, Stanwood & Gamble Co., Cincinnati, O.  
Luffel & Co., James, Springfield, O.  
Lombard Iron Works, Augusta, Ga.  
McKenzie Iron Works, Charlotte, N. C.  
Murray Iron Works Co., Burlington, Ia.  
Phoenix Iron Works Co., Meadville, Pa.  
Schodell Iron Works, Macon, Ga.  
Sturtevant Co., B. F., Hyde Park, Boston, Mass.  
Vetter Mfg. Co., Milwaukee, Wis.  
Westinghouse Machine Co., Pittsburgh, Pa.

## Envelopes.

Young & Selden Co., Baltimore, Md.

## Excavating Machinery.

American Clay Machinery Co., The, Bucyrus, Ohio.  
American Steel Dredge Co., Fort Wayne, Ind.  
Bay City Dredge Works, Bay City, Mich.  
Byers Mach. Co., The John F., Ravenso, O.  
Economy Excavator Co., Iowa Falls, Iowa.  
Fairbanks Steam Shovel Co., Marion, O.  
Hayward Co., New York, N. Y.  
Jeffrey Mfg. Co., Columbus, O.  
Kesterson Drill & Equipment Co., Beaver Falls, Pa.  
Lidgerwood Mfg. Co., New York, N. Y.  
Marion Steam Shovel Co., Marion, O.  
Monaghan Machine Co., Chicago, Ill.  
Morris Machine Works, Baldwinville, N. Y.  
National Hoisting Engine Co., Harrison, N. J.  
The Automatic Shovel Co., Lorain, Ohio.  
Williams Co., The G. H., Cleveland, O.

## Excavators. (Trench.)

Bay City Dredge Works, Bay City, Mich.  
Economy Excavator Co., Iowa Falls, Iowa.  
Fairbanks Steam Shovel Co., Marion, O.  
Hayward Co., The, New York, N. Y.  
Monaghan Machine Co., Chicago, Ill.

## Excelsior Machinery.

Kline, Lewis T., Alpena, Mich.

## Exhaust Heads.

American Spiral Pipe Works, Chicago, Ill.

## Exhibits. (Machinery Builders' Equipment and Supplies.)

Builders' Exchange, Baltimore, Md.

## Expansion Joints.

Badger & Sons Co., E. B., Boston, Mass.

## Expansion Joints. (Street and Road.)

Philip Carey Co., The, Cincinnati, Ohio.

## Expanded Metal. [See Lath.]

## Explosives.

Du Pont Powder Co., Wilmington, Del.  
Keystone Nat'l. Powder Co., Emporium, Pa.

## Export Agents. (South America.)

Lutz, Friedr. W., Richmond, Va.

## Factory Sites. (Town and Railroad.) [See Industrial, Agricultural and Commercial Opportunities.]

## Fans. (Electric.)

General Electric Co., Schenectady, N. Y.

## Fans. (Ventilating.) [See Blowers, Exhaust Fans.]

## Fastener Driving Machine. (Corrugated Joint.)

Saranac Machine Co., Benton Harbor, Mich.

## Feed-Water Heaters and Purifiers.

American Water Softener Co., Philadelphia, Pa.  
Blake & Knowles Steam Pump Works, East Cambridge, Mass.  
Murray Iron Works Co., Burlington, Ia.  
National Pipe Bending Co., New Haven, Conn.  
Scaife & Sons Co., Wm. B., Pittsburgh, Pa.  
Stewart Heater Co., Buffalo, N. Y.

## Feed-Water Heater and Purifier and Oil Separator Combined.

Blake & Knowles Steam Pump Works, East Cambridge, Mass.

## Felt. (Building, Sheathing.)

Barrett Mfg. Co., Philadelphia, Pa.

## Fencing. (Woven Wire Field.)

American Steel & Wire Co., Chicago, Ill.  
Cyclone Fence Co., Waukegan, Ill.  
Gulf States Steel Co., Birmingham, Ala.

## Fencing, Entrance Gates. (Iron, Steel, Wire.)

American Steel & Wire Co., Chicago, Ill.  
Bolles Iron & Wire Wks., J. E., Detroit, Mich.  
Cincinnati Iron Fence Co., Cincinnati, Ohio.  
Cyclone Fence Co., Waukegan, Ill.  
Dow Wire & Iron Works, Louisville, Ky.  
Duffer & Co., Baltimore, Md.  
Eureka Supply Co., Chattanooga, Tenn.  
New Jersey Wire Cloth Co., Trenton, N. J.  
Ohio Elevator & Mach. Co., The, Columbus, O.

## Fertilizer Machy. [See also Phosphate Machy.]

Stedman's Foundry & Machine Works, Aurora, Ind.  
Vaik & Murdoch Iron Works, Charleston, S. C.

## Files.

Barrett Co., G. & H., Philadelphia, Pa.  
Nicholson File Co., Providence, R. I.

## Filters. (Water, for Domestic and Industrial Purposes.)

American Water Softener Co., Philadelphia, Pa.  
International Filter Co., Chicago, Ill.  
New York Con. Jewell Fil. Co., New York, N. Y.

## Fire Clay. [See Brick, Fire.]

## Fire Door Fixtures.

Richmond Safety Gate Co., Richmond, Ind.  
Victor Mfg. Co., Newburyport, Mass.

## Fire Extinguishers.

Badger & Sons Co., E. B., Boston, Mass.

## Fire Escapes.

Bolles Iron & Wire Works, J. E., Detroit, Mich.  
Chesapeake Iron Works, Baltimore, Md.  
Eureka Supply Co., Chattanooga, Tenn.

## Fire Hose.

Eureka Fire Hose Mfg. Co., New York, N. Y.

## Fire Places. (Brick and Tile.)

Hood Brick Co., B. Miffin, Atlanta, Ga.

## Fireproof Building Construction. [See Concrete Construction.]

Fireproof Building Material.  
Bannon Pipe Co., P., Louisville, Ky.  
Johns-Manville Co., H. W., New York, N. Y.

## Fireproof Doors and Shutters.

Kinner Mfg. Co., Columbus, O.  
Richmond Safety Gate Co., Richmond, Ind.  
Victor Mfg. Co., Newburyport, Mass.  
Wagner's Sons Co., J. F., Louisville, Ky.  
Wilson Corp., J. G., New York, N. Y.

## Fireproof Windows. [See Window Frames and Sashes (Fireproof).]

Hood Brick Co., B. Miffin, Atlanta, Ga.

## Fixtures. (Electric Lighting.)

Hill & Co., Walter E., Baltimore, Md.

## Flanges. (Iron and Steel.)

American Cast Iron Pipe Co., Birmingham, Ala.  
American Pipe & Construction Co., Phila., Pa.  
American Spiral Pipe Works, Chicago, Ill.  
Dart Mfg. Co., E. M., Providence, R. I.  
Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
National Tube Co., Pittsburgh, Pa.  
U. S. Cast Iron Pipe & Fdry. Co., Burlington, N. J.  
Wood & Co., R. D., Philadelphia, Pa.

## Flooring. (Oreosoted Block.)

Republic Crosscutting Co., Indianapolis, Ind.

## Flooring. (Hardwood, Maple, Oak.)

Whitting, William S., Elizabethton, N. C.  
Floor Surfacing Machines. (Automatic Ball Bearing, Electric.)  
Waywell Chappell & Co., Chicago, Ill.

## Flour and Grist Mill Machinery and Supplies.

Caldwell & Sons Co., H. W., Chicago, Ill.  
Salem Foundry & Machine Works, Salem, Va.  
Star Co., B. F., Baltimore, Md.  
Wolf Co., Chambersburg, Pa.

## Flue Lining.

Owensboro Sewer Pipe Co., Owensboro, Ky.  
Southern Sewer Pipe Co., Birmingham, Ala.

## Forges.

Buffalo Forge Co., Buffalo, N. Y.

## Forgings.

Weimer Chain & Iron Co., Lebanon, Pa.

## Foundations. (Waterproof.)

Requarth Co., O. W., Charlotte, N. C.

## Foundry Equipment and Supplies.

Hill-Branner Fdry. Supply Co., Cincinnati, O.  
Newport Sand Bank Co., Inc., Newport, Ky.

## Foundry Facings. (Talc and Soapstone.)

Georgia Talc Co., Asheville, N. C.  
Hill-Branner Fdry. Supply Co., Cincinnati, O.

## Foundry and Machine Shops.

Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
Golden Foundry & Machine Wks., Columbus, Ga.  
Grainier & Co., Inc., Louisville, Ky.  
Lombard Iron Works, Augusta, Ga.  
Titus, E. E., Petersburg, Va.  
Vaik & Murdoch Iron Works, Charleston, S. C.

## Frogs. [See Railroad Frogs and Switches.]

## Fuel Economizers.

Green Fuel Economizer Co., Matineawan, N. Y.  
Sturtevant Co., B. F., Hyde Park, Boston, Mass.

## Fuel Oil.

Gulf Refining Co., Pittsburg, Pa.  
U. S. Asphalt Refining Co., New York, N. Y.

## Furnaces. (For Industrial Purposes.)

Smythe Co., The S. R., Pittsburgh, Pa.

## Furniture. (Metal.)

The Van Dorn Iron Works Co., Cleveland, Ohio.

## Fuses. (Electrical.)

Economy Fuse & Mfg. Co., Chicago, Ill.

## Fuse Shells. (Renewable.)

Economy Fuse & Mfg. Co., Chicago, Ill.

## Fuses, Bases and Fittings.

Johns-Manville Co., H. W., New York, N. Y.

## Galvanized Steel and Iron.

American Sheet & Tin Plate Co., Pittsburgh, Pa.  
La Belle Iron Works, Steubenville, O.  
McCalla Co., Harold, Philadelphia, Pa.  
Whitaker-Glessner Co., Portsmouth Plant, Portsmouth, Ohio

## Garage and House. (Portable.)

Dixie Culvert & Metal Co., Atlanta, Ga.  
Steel Products Co., The, Savannah, Ga.

## Garbage Disposal Plants.

Stacy-Bates Co., Minneapolis, Minn.

## Gas Blowers. (Turbine.)

Terry Steam Turbine Co., Hartford, Conn.

## Gas Engines. [See Engines, Gas.]

## Gas Machines.

Kemp Mfg. Co., O. M., Baltimore, Md.  
Milburn Co., Alex. H., Baltimore, Md.

## Gas Plants.

Gas Engineering Co., Trenton, N. J.  
Power & Mining Machinery Co., Oudahy, Wis.  
Western Gas Construction Co., Ft. Wayne, Ind.

## Gas Producers.

Smythe Co., The S. R., Pittsburgh, Pa.  
Westinghouse Machine Co., Pittsburgh, Pa.  
Wood & Co., R. D., Philadelphia, Pa.

## Gasoline and Kerosene.

Gulf Refining Co., Pittsburg, Pa.

## Gas and Steam Fitters' Tools.

Sanders' Sons, D., Yonkers, N. Y.

## Gears.

Caldwell & Sons Co., H. W., Chicago, Ill.  
Cresson-Morris Co., Philadelphia, Pa.  
James Mfg. Co., D. O., Chicago, Ill.  
Jeffrey Mfg. Co., Columbus, O.

## Generating Sets.

Sturtevant Co., B. F., Hyde Park, Boston, Mass.  
Triumph Electric Co., Cincinnati, O.

## Geologists.

Davis, Geo. O., Phila., Pa.  
Froehling & Robertson, Richmond, Va.  
Grimsley, G. F., Martinsburg, W. Va.

## Glass. (Plate, etc.)

Binswanger & Co., Memphis, Tenn.

## Governors. (Steam Engine.)

Pickering Governor Co., Portland, Conn.

## Grain Elevator Supplies.

Caldwell & Sons Co., H. W., Chicago, Ill.  
Jeffrey Mfg. Co., Columbus, O.

## Granite.

Southern Marble & Granite Co., Spartanburg, S. C.

## Grapple.

Dixon Crucible Co., Joseph, Jersey City, N. J.

## Grates and Grate Bars.

Huber Grate Bar & Stoking Co., Baltimore, Md.  
Thomas Grate Bar Co., Birmingham, Ala.

## Gravel.

Arundel Sand & Gravel Co., Baltimore, Md.

## Gravel. (Roofing and Road)

American Ballast Co., Knoxville, Tenn.

## Gravity Spiral Chutes.

Mathews Gravity Carrier Co., Ellwood City, Pa.

## Grease.

Albany Lubricating Co., New York, N. Y.

## Grease Cups.

Albany Lubricating Co., New York, N. Y.  
Lunkenheimer Co., The, Cincinnati, O.

## Greases and Lubricating Compounds.

Albany Lubricating Co., New York, N. Y.  
Gleason Signal Oil Co., Franklin, Pa.  
Robinson & Son Co., Wm. O., Baltimore, Md.

## Grinders. (Gypsum, Limestone, etc.)

Stedman's Foundry & Machine Wks., Aurora, Ind.

## Grinding Wheels.

Carborundum Co., Niagara Falls, N. Y.  
Vitrified Wheel Co., Westfield, Mass.

## Groovers.

Ruther Bros. Saw Mfg. Co., Inc., Rochester, N. Y.

## Gunpowder.

Du Pont Powder Co., Wilmington, Del.  
Keystone National Powder Co., Emporium, Pa.

## Handle Machinery. [See Woodworking Machinery.]

## Hangers. [See Pulleys, Shafting and Hangers.]

## Hay Tools.

Myers & Bro., F. E., Ashland, Ohio.

## Heater. (Asphalt.)

Gummer & Son Co., F. D., The, Cleveland, Ohio.

## Heating Apparatus, Engineers and Contractors.

Allen-Scales Engineering Co., Inc., Nashville, Tenn.  
American Blower Co., Detroit, Mich.  
Buffalo Steam Pump Co., Buffalo, N. Y.  
Kelly, Thos. C., Cincinnati, Ohio.  
Sturtevant, B. F., Hyde Park, Boston, Mass.  
Walker Electric & Plumbing Co., Rome, Ga.

## Hoisting Machinery.

Byers Machine Co., The John F., Ravenna, Ohio  
Dake Engine Co., Grand Haven, Mich.  
Erie Clutch & Pulley Co., Erie, Pa.  
Flory Mfg. Co., S., Bangor, Pa.  
Lidgerwood Mfg. Co., New York, N. Y.  
Monaghan Machine Co., Chicago, Ill.  
Stroudsburg Engine Works, Stroudsburg, Pa.

## Hoists.

CHAIN.  
Spindel, J. G., Reading, Pa.

## ELECTRIC.

Lidgerwood Mfg. Co., New York, N. Y.  
Monaghan Mch. Co., Chicago, Ill.  
National Hoisting Engine Co., Harrison, N. J.  
Ohio Elevator Co., New York, N. Y.  
Patten Mfg. Co., Chattanooga, Tenn.

## GASOLINE.

C. H. & E. Mfg. Co., Inc., Milwaukee, Wis.  
Erie Clutch & Pulley Co., Erie, Pa.  
Patten Mfg. Co., Chattanooga, Tenn.

## Hoists. (Steam.)

Byers Machine Co., John F., Ravenna, Ohio.  
Flory Mfg. Co., S., Bangor, Pa.  
Lidgerwood Mfg. Co., New York, N. Y.  
Stroudsburg Engine Works, Stroudsburg, Pa.

## Hollow Building Tile.

Killian Fireproofing & Brick Works, Killian, S. O.  
Oconee Brick & Tile Co., Milledgeville, Ga.

## Hoops, Bands, etc. (Galvanized.)

McCalla Co., Harold, Philadelphia, Pa.

## Hose. [See Fire Hose.]

## Hotels.

Cawthon, The, Mobile, Ala.  
DeSoto Hotel, Tampa, Fla.  
Gr

**Insulated Wires and Cables.**

Safety Insulated Wire &amp; Cable Co., New York, N. Y.

**Insulating Materials.**General Electric Co., Schenectady, N. Y.  
John-Manville Co., H. W., New York, N. Y.**Insurance.**Harford Steam Boiler Inspector & Insurance Co.,  
Bartford, Conn.**Investment Securities.**Leach & Co., A. B., New York, N. Y.  
New First National Bank, Columbus, O.  
Powell, Garard & Co., Chicago, Ill.  
Provident Savings Bank & Trust Co., Cincinnati,  
Ohio.**Iron.**Allegheny Steel Co., Pittsburgh, Pa.  
La Belle Iron Works, Steubenville, O.  
Republic Iron & Steel Co., Youngstown, O.  
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.  
Union Drawn Steel Co., Beaver Falls, Pa.  
Wood Iron & Steel Co., Allg., Philadelphia, Pa.**Irrigation Machinery.**

Cameron Steam Pump Wks., A. S. New York, N. Y.

**Joist Hangers.**

The Van Dorn Iron Works Co., Cleveland, Ohio.

**Kettles. (Steam Jacket.)**

Badger &amp; Sons Co., E. R., Boston, Mass.

**Lace Leather.**

Graton &amp; Knight Mfg. Co., Worcester, Mass.

**Lamps. (Arc and Incandescent.)**Boston-Economy Lamp Division, National Lamp  
Works of General Electric Co., Danvers, Mass.  
General Electric Co., Schenectady, N. Y.  
Lee Electric Co., Baltimore, Md.  
Piedmont Electric Co., Asheville, N. C.**Lamps. (Carbon and Tungsten.)**

Sewman Electric Lamp Co., Cincinnati, O.

**Lamp Posts. (Electric, Gas.)**

Western Gas Construction Co., Ft. Wayne, Ind.

Lands. (Mineral, Timber, Farm, etc.) [See In-  
dustrial, Agricultural and Commercial Oppor-  
tunities.]**Landscape Architects. (See Engineers.) [Land-  
scape]****Lathes. (Engine.)**

Greaves, Klusman Tool Co., The, Cincinnati, O.

**Lawn Furniture. (Wire.)**Bolles Iron & Wire Works, J. E., Detroit, Mich.  
Cincinnati Iron Fence Co., Cincinnati, Ohio.  
Dufur & Co., Baltimore, Md.  
Dufur, Baggett & Co., Baltimore, Md.**Lights. (Portable Acetylene.)**

Wilburn Co., Alex. N., Baltimore, Md.

**Liquor Filters.**

International Filter Co., Chicago, Ill.

**Lithographers, Engravers.**

Young &amp; Selden Co., Baltimore, Md.

**Lockers (Steel)**Bernstein Mfg. Co., Phila., Pa.  
Keighley Metal Ceiling Mfg. Co., S., Pittsburgh,  
Pa.  
Van Harlingen, J. M., Atlanta, Ga.**Locomotives.**BALDWIN.  
Baldwin Locomotive Wks., The, Philadelphia, Pa.  
Oliver Mfg. Co., Corry, Pa.  
Gard, Geo. B., Cincinnati, O.  
Davenport Locomotive Works, Davenport, Ia.  
Fate Co., J. D., Plymouth, Ohio.  
Jeffrey Mfg. Co., Columbus, O.  
Lima Locomotive Corporation, Lima, O.  
Porter Co., H. K., Pittsburgh, Pa.  
Southern Iron & Equipment Co., Atlanta, Ga.  
Thaw & Williams, Cincinnati, O.**RAILWAY.**Baldwin Locomotive Wks., The, Philadelphia, Pa.  
Lima Locomotive Corporation, Lima, O.  
Porter Co., H. K., Pittsburgh, Pa.**Looms and Weaving Machinery.**Draper Co., Hopdale, Mass.  
Mason Machine Works, Taunton, Mass.  
Saco-Lowell Shops, Boston, Mass.**Loom Harness.**

American Supply Co., Providence, R. I.

**Lubricants.**Albany Lubricating Co., New York, N. Y.  
Oils Elevator Co., New York, N. Y.**Lubricants. (Graphite.)**

Dixon Crucible Co., Joseph, Jersey City, N. J.

**Lumber.**

Industrial Lumber Co., Elizabeth, La.

**Lumber. (Crescent.)**American Crescent Works, New Orleans, La.  
National Lumber & Creosoting Co., Texarkana, Ark.**Lumber. (Heavy Construction, Pitch Pine, etc.)**

Industrial Lumber Co., Elizabeth, La.

National Lumber &amp; Creosoting Co., Texarkana, Ark.

**Lumber Buggies.**

Soule Steam Feed Works - Meridian, Miss.

**Lumber Stackers.**

Soule Steam Feed Works, Meridian, Miss.

**Machinery. (Special.)**Bliss Co., E. W., Brooklyn, N. Y.  
Eagle Mfg. Co., Cincinnati, Ohio.  
Elmer, Lewis T., Alpena, Mich.  
Universal Machine Co., Baltimore, Md.**Machinery and Supplies. (New and Second-  
Hand Bargains.)**Assets Purchasing Co., Wheeling, W. Va.  
Birtwell, W. L., Phila., Pa.  
Boston Iron & Metal Co., Balto., Md.  
Central Transfer Co., Baltimore, Md.  
Chicago House Wrecking Co., Chicago, Ill.  
Cleveland Belting & Machinery Co., Cleveland, O.  
Dusen & Son, New York, N. Y.  
Eagle Pipe Supply Co., Inc., New York, N. Y.  
Lehman, Charles T., Birmingham, Ala.Lodge & Shipley Mach. Tool Co., Cincinnati, O.  
Marine Metal & Supply Co., New York, N. Y.  
Moore & Co., Edgar M., Pittsburgh, Pa.  
New River Co., Macdonald, W. Va.Nussbaum & Co., V. M., Fort Wayne, Ind.  
Pannmuller Engineering Co., Chicago, Ill.  
Power Equipment Co., New York, N. Y.  
Practice Tool & Supply Co., New York, N. Y.  
Randle Machinery Co., Cincinnati, O.  
Read Co., Howard W., Philadelphia, Pa.  
Sachsenmaier & Co., George, Philadelphia, Pa.  
Samuel, Frank, Philadelphia, Pa.  
Severly's Sons, Inc., L. E., Philadelphia, Pa.  
Stearns, John C., Kansas City, Mo.  
Tampa Machinery Exchange, Tampa, Fla.  
Thaw & Williams, Cincinnati, O.  
Toomey, Frank, Inc., Philadelphia, Pa.  
Wilson Machy. Co., St. Louis, Mo.  
Winterer, Herman L., Philadelphia, Pa.**Machine Tools.**

Greaves, Klusman Tool Co., The, Cincinnati, O.

**Machinists. (Engineers.)**

Universal Machine Co., Baltimore, Md.

**Magnesia Materials.**

John-Manville Co., H. W., New York, N. Y.

**Magnetic Separators.**

Buchanan &amp; Co., Inc. O. G., New York, N. Y.

**Mail Chutes.**

Cutler Mail Chute Co., Rochester, N. Y.

**Mechanical Draft.**Buffalo Forge Co., Buffalo, N. Y.  
Sturtevant Co., B. F., Hyde Park, Boston, Mass.**Metal Ceilings. [See Ceilings, Metal.]****Metaline.**

Metaline Co., Long Island City, N. Y.

**Metal. (For Tanks, Culverts, Roofing, etc.)**Whitaker-Giesner Co., Portsmouth Plant, Port-  
smouth, Ohio.**Metal Culverts. [See Culverts.] (Corrugated  
Metal.)****Metal Shingles. [See Shingles.] (Metal.)****Metal Window Frames and Sash. [See Win-  
dow Frames and Sash.] (Fireproof.)****Metal Work. [See Sheet Metal Work.]****Metal-Working Machinery. (Sheet.)**

Bliss Co., E. W., Brooklyn, N. Y.

**Meters. (Water.)**

Alberger Pump &amp; Condenser Co., New York, N. Y.

**Meter Boxes, Couplings, Gauges. (Water.)**

Clark Co., H. W., Mattoon, Ill.

**Micrometers, Calipers, etc.**

Starrett Co., L. S., Athol, Mass.

**Milk Filters. (Liquor, Milk, etc.)**

International Filter Co., Chicago, Ill.

**Mill Engineers and Architects.**

O'Brian, W. C., Memphis, Tenn.

Sirrino, J. E., Greenville, S. C.

**Mill Supplies.**Bailey-Lobby Co., Charleston, S. C.  
Cameron & Barkley Co., Charleston, S. C.  
Gainesville Iron Works, Gainesville, Ga.  
Lombard Iron Works, Augusta, Ga.  
Lunkenheimer Co., The, Cincinnati, O.  
Mecklenburg Iron Works, Charlotte, N. C.  
Salem Foundry & Machine Wks., Salem, Va.  
Starr Co., B. F., Baltimore, Md.  
Wolf Co., Chambersburg, Pa.**Mining Machinery. (Gold, Copper, Plate, etc.)**Bartlett & Snow Co., O. O., Cleveland, O.  
Jeffrey Mfg. Co., Columbus, O.  
McLannan-Stone Mach. Co., Hollidaysburg, Pa.  
Mecklenburg Iron Works, Charlotte, N. C.  
Raymond Bros. Impact Pulv. Co., Chicago, Ill.**Mixers. (Concrete.)**Milwaukee Concrete Mixer Co., Milwaukee, Wis.  
Van Dusen, Royce Co., The, Columbus, O.**Mixing Machinery.**

Dunning, W. D., Syracuse, N. Y.

**Mortar Colors.**

Chattanooga Paint Co., Chattanooga, Tenn.

**Motor Trucks. (Gasoline.)**

White Co., The, Cleveland, O.

**Motor Trucks. (Second Hand.)**

Mar-Dei Mobile Co., Baltimore, Md.

**Music Wire.**

American Steel &amp; Wire Co., Chicago, Ill.

Waterbury Co., The, New York, N. Y.

**Nails. (Oak.)**

La Belle Iron Works, Steubenville, O.

**Nails and Spikes.**La Belle Iron Works, Steubenville, Ohio.  
Republic Iron & Steel Co., Youngstown, O.  
Youngstown Sheet & Tube Co., Youngstown, O.**Nuts. [See Bolts, Nuts, Rivets, etc.]****Oil. (Creosote.)**

Barrett Mfg. Co., Philadelphia, Pa.

**Oils. (Lubricating, Etc.)**Albany Lubricating Co., New York, N. Y.  
Galea Signal Oil Co., Franklin, Pa.  
Gulf Refining Co., Pittsburgh, Pa.  
Robinson & Son Co., Wm. O., Baltimore, Md.**Oil Cans.**

Wall Mfg. Supply Co., F., Allegheny, Pa.

**Oil Engines. [See Engines (Oil).]****Oil Separators.**

Stewart Heater Co., Buffalo, N. Y.

**Oil Well Machinery.**Keystone Steam Well Mach. Co., Beaver Falls, Pa.  
Williams Bros., Ithaca, N. Y.**Ornamental Iron Works.**Bolles Iron & Wire Wks., J. E., Detroit, Mich.  
Chesapeake Iron Works, Baltimore, Md.  
Dow Wire & Iron Works, Louisville, Ky.  
Ohio Elevator & Mach. Co., The, Columbus, O.  
Schrieber & Sons Co., The L., Cincinnati, O.  
Sneed Architectural Iron Works, Louisville, Ky.  
The Van Dorn Iron Works Co., Cleveland, Ohio.**Oxygen.**

International Oxygen Co., New York, N. Y.

**Oxygen Generators.**

International Oxygen Co., New York, N. Y.

**Oxy-Acetylene Welding and Cutting Outfit  
and Supplies.**International Oxygen Co., New York, N. Y.  
Milburn Co., Alex. N., Baltimore, Md.**Packing. (Asbestos, Metallic, Rubber, Leather,  
etc.)**Goodyear Tire & Rubber Co., Akron, O.  
Graton & Knight Mfg. Co., Worcester, Mass.  
Jenkins Bros., New York, N. Y.  
John-Manville Co., H. W., New York, N. Y.  
Power Specialty Co., New York, N. Y.  
United Lead Co., New York, N. Y.**Packing. (Lead Wool.)**

United Lead Co., New York, N. Y.

**Paint. (Metal Surfaces.)**

Dixon Crucible Co., Joseph, Jersey City, N. J.

**Paint. (Preservative.)**

Reeves Co., The, New Orleans, La.

**Paint. (Roofing, Building, etc.)**Cameron & Barkley Co., Charleston, S. C.  
Chattanooga Paint Co., Chattanooga, Tenn.**Paper. (Roofing, Building, Sheeting, etc.)**

Barrett Mfg. Co., Philadelphia, Pa.

Cameron &amp; Barkley Co., Charleston, S. C.

**Partitions. (Wooden Rolling.)**

Van Harlingen, J. M., Atlanta, Ga.

**Patent Attorneys.**Brown, Eugene C., Washington, D. C.  
Chandler & Chandlee, Washington, D. C.  
Coleman, Watson E., Washington, D. C.  
Evans & Co., Victor J., Washington, D. C.  
Hodges, Vernon E., Washington, D. C.  
Jenner, Herbert, Washington, D. C.  
Lacey, R. S. & A. R., Washington, D. C.  
McLannan, A. S., Chattanooga, Tenn.  
Mills, Mansell F., Washington, D. C.  
Parker, C. L., Washington, D. C.  
Woodworth John R., Washington, D. C.**Paving Blocks. (Granite.)**Southern Marble & Granite Co., The, Sparsburg,  
S. C.**Paving Brick.**Carlyle Paving Brick Co., Portsmouth, O.  
Copeland-Ingis Shale Brick Co., Birm'gh'm, Ala.  
Dunn Wire-Cut-Long Brick Co., Connest, Ohio  
Southern Clay Mfg. Co., Chattanooga, Tenn.  
Standard Brick Co., Macon, Ga.**Perforated Metal.**Caldwell & Son, H. W., Chicago, Ill.  
Erdie Perforating Co., Rochester, N. Y.  
Hendricks Mfg. Co., The, Concordia, Pa.  
Manhattan Perforated Metal Co., New York, N. Y.  
Mundt & Sons, Charles, Jersey City, N. J.**Petroleum Refiners.**Gulf Refining Co., Pittsburgh, Pa.  
Standard Oil Co., Inc., Newark, N. J.**Phosphate Machinery.**American Process Co., New York, N. Y.  
Bailey-Lobby Co., The, Charleston, S. C.  
Cameron & Barkley Co., Charleston, S. C.  
McLannan-Stone Mach. Co., Hollidaysburg, Pa.  
Raymond Impact Pulv. Co., Chicago, Ill.  
Valk & Murdoch Iron Works, Charleston, S. C.**Pig Iron.**La Belle Iron Works, Steubenville, O.  
Republic Iron & Steel Co., Youngstown, O.  
Tennessee Coal, Iron & R. R. Co., Birm'gh'm, Ala.**Pile Drivers.**

Volcan Iron Works, Chicago, Ill.

**Pile Driving and Wharf Building.**

Murray &amp; Co., Inc., W. D., Norfolk, Va.

**Piling. (Creosoted.)**American Creosote Works, New Orleans, La.  
Intern'l Creosoting & Const. Co., Galveston, Tex.  
Southern Creosoting Co., Ltd., Slidell, La.  
Southern Paving Const. Co., Chattanooga, Tenn.**Pillow Blocks.**Golden's Foundry & Machine Co., Columbus, Ga.  
Medart Patent Pulley Co., St. Louis, Mo.**Pipe.**Allegheny Steel Co., Pittsburgh, Pa.  
La Belle Iron Works, Steubenville, Ohio.  
National Tube Co., Pittsburgh, Pa.  
Youngstown Sheet & Tube Co., Youngstown, O.**Pipes. (Cast Iron.)**American Cast Iron Pipe Co., Birmingham, Ala.  
American Pipe & Construction Co., Phila., Pa.  
Clow & Sons, James B., Chicago, Ill.  
Donaldson Iron Co., Emaus, Pa.  
Giamorgan Pipe & Foundry Co., Lynchburg, Va.  
Lynchburg Foundry Co., Lynchburg, Va.  
Massillon Iron & Steel Co., Massillon, O.  
U. S. Cast Iron Pipe & Fdry. Co., Burlington, N. J.  
Wood & Co., R. D., Philadelphia, Pa.**Pipe. (Coil.)**Frick Co., The, Waynesboro, Pa.  
National Pipe Bending Co., New Haven, Conn.  
York Mfg. Co., York, Pa.**Pipe. (Corrugated Culvert.) [See Culvert (Cor-  
rugated Metal).]****Pipe (Lead)**

United Lead Co., New York, N. Y.

**Pipe. (Riveted.)**

Keeler Co., E., Williamsport, Pa.

**Pipe. (Second Hand.)**Eagle Pipe Supply Co., Inc., New York, N. Y.  
Marine Metal & Supply Co., New York, N. Y.**Pipe. (Spiral Riveted.)**

American Spiral Pipe Works, Chicago, Ill.

**Pipe. (Spiral Steel.)**

Standard Spiral Pipe Works, Chicago, Ill.

**Pipe. (Sewer, Vitriol.) [See Sewer Pipe, Vit-  
rified.]****Pipe. (Wood.)**

Wyckoff &amp; Son Co., A., Elmira, N. Y.

**Pipe. (Wrought Iron.)**

Youngstown Sheet &amp; Tube Co., Youngstown, O.

**Pipe Bends.**Pittsburgh Valve, Fdry. & Const. Co., Pittsburgh,  
Pa.**Pipe Covering. (Steam.)**Chesapeake Roofing & Pipe Covering Co., Inc.,  
Baltimore, Md.  
Southern Asbestos Mfg. Co., Inc., Richmond, Va.  
Wyckoff & Son Co., A., Elmira, N. Y.**Pipe Cutting and Threading Machinery.**

Saunders' Sons, D., Yonkers, N. Y.

**Pipe Fittings.**American Cast Iron Pipe Co., Birmingham, Ala.  
Lunkenheimer Co., The, Cincinnati, O.  
Pittsburgh Valve, Fdry. & Const. Co., Pittsburgh,  
Pa.**Pipe Mfg. Co., York, Pa.**Pipe Jointing. (Gas and Water Main.)  
United Lead Co., New York, N. Y.**Pipe Unions and Joints.**Dart Mfg. Co., E. M., Providence, R. I.  
National Tube Co., Pittsburgh, Pa.**Pipe Wrenches and Cutters.**

Saunders' Sons, D., Yonkers, N. Y.

**Piping System. (Designed and Installed.)**Pittsburgh Valve, Foundry & Construction Co.,  
Pittsburgh, Pa.**Pitch.**

Barrett Mfg. Co., Philadelphia, Pa.

**Plaster Machinery.**

Bartlett &amp; Snow Co., O. O., Cleveland, O.

**Plates.**Allegheny Steel Co., Pittsburgh, Pa.  
Cincinnati Iron & Steel Co., Cincinnati, O.  
Wood Iron & Steel Co., Allg., Philadelphia, Pa.**Pneumatic Tools. [See Tools-Pneumatic.]****Poles. (Creosoted.)**American Creosote Works, New Orleans, La.  
Intern'l Creosoting & Const. Co., Galveston, Tex.  
National Lumber & Creos. Co., Texarkana, Ark.  
Southern Creosoting Co., Ltd., Slidell, La.  
Southern Paving Const. Co., Chattanooga, Tenn.  
Southern Wood Preserving Co., Atlanta, Ga.**Polishing Machinery. (Wheels and Blocks.)**Carborundum Co., Niagara Falls, N. Y.  
Vitriol Wheel Co., Westfield, Mass.**Power Plants. (Steam and Electric.)**Allen-Scales Engineering Co., Inc., Nashville, Tenn.  
Assets Purchasing Co., Wheeling, W. Va.**Power Transmission Machinery.**Bailey-Lobby Co., Charleston, S. C.  
Caldwell & Son Co., H. W., Chicago, Ill.  
Crescon-Morris Co., Philadelphia, Pa.  
Golden's Foundry & Machine Co., Columbus, Ga.  
Jeffrey Mfg. Co., Columbus, O.  
Jones & Laughlin Steel Co., Pittsburgh, Pa.  
Medart Patent Pulley Co., St. Louis, Mo.  
Schofield Iron Works, Macon, Ga.  
Smith-Courtesy Co., Richmond, Va.  
Wolf Co., The, Chambersburg, Pa.  
Wood's Sons, T. B., Chambersburg, Pa.Presses. (Baling, Cottonseed Oil, etc. Hydran-  
tic and Power.)  
Boomer & Rochert Press Co., Syracuse, N. Y.  
Gardwell Machine Co., Richmond, Va.  
Continental Gin Co., Birmingham, Ala.  
French Oil Mill Mchry. Co., The, Piqua, Ohio  
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## Pulverizers.

Anstett Mfg. Co., Chicago, Ill.  
 Grondier Pat. Crusher & Pulv. Co., St. Louis, Missouri.  
 Jeffrey Mfg. Co., Columbus, O.  
 McLanahan-Stone Mach. Co., Hollidaysburg, Pa.  
 Raymond Bros., Impact Pulv. Co., Chicago, Ill.  
 Stedman's Foundry & Machine Wks., Aurora, Ind.  
 Western Wheel Scraper Co., Aurora, Ill.

## Pumping Machinery.

Affiliated Manufacturers Co., Milwaukee, Wis.  
 Alberger Pump & Condenser Co., New York, N. Y.  
 Cameron Steam Pump Wks., A. S. New York, N. Y.  
 Cook, A. D., Lawrenceburg, Ind.  
 Deane Steam Pump Plant, Holyoke, Mass.  
 Erie Pump & Equipment Co., Erie, Pa.  
 Holland Machine Co., New York, N. Y.  
 Keystone Pump & Well Engine Co., Beaver Falls, Pa.  
 Moffatt Machinery Mfg. Co., Charlotte, N. C.  
 Morris Machine Works, Baldwinville, N. Y.  
 Myers & Bros., F. E., Ashland, O.  
 Platt Iron Works Co., Dayton, Ohio.  
 Wood & Co., R. D., Philadelphia, Pa.  
 Worthington, Henry R., Harrison, N. J.

## Pumps. (Air.)

Blakeslee Mfg. Co., Du Quoin, Ill.

## Pumps. (Air Lift.)

Sullivan Mehry, Co., Chicago, Ill.

## Pumps. (Boiler Feed.)

Alberger Pump & Condenser Co., New York, N. Y.  
 Blakeslee Mfg. Co., Du Quoin, Ill.  
 Cameron Steam Pump Wks., A. S., New York, N. Y.  
 Jeaneville Iron Works Plant, Hazleton, Pa.  
 Moffatt Machinery Mfg. Co., Charlotte, N. C.  
 Murray Iron Works Co., Burlington, Ia.  
 Myers & Bros., F. E., Ashland, O.

## Pumps. (Centrifugal.)

Alberger Pump & Condenser Co., New York, N. Y.  
 Buffalo Steam Pump Co., Buffalo, N. Y.  
 Cameron Steam Pump Wks., A. S., New York, N. Y.  
 Erie Pump & Equipment Co., Erie, Pa.  
 Holland Machine Co., New York, N. Y.  
 Jeaneville Iron Works Plant, Hazleton, Pa.  
 Morris Machine Works, Baldwinville, N. Y.  
 Pacific Flank Tank Co., New York, N. Y.  
 Platt Iron Works Co., Dayton, Ohio.  
 Wood & Co., R. D., Philadelphia, Pa.  
 Worthington, Henry R., Harrison, N. J.

## Pumps. (Deep Well.)

Cameron Steam Pump Wks., A. S., New York, N. Y.  
 Cook, A. D., Lawrenceburg, Ind.  
 Holland Machine Co., New York, N. Y.  
 Keystone Pump & Well Engine Co., Beaver Falls, Pa.  
 Layne & Bowler Co., Houston, Tex.

## Pumps. (Dredging.)

Buffalo Steam Pump Works, Buffalo, N. Y.  
 Erie Pump & Equipment Co., Erie, Pa.  
 Holland Mch. Co., New York, N. Y.  
 Morris Machine Works, Baldwinville, N. Y.  
 Wood & Co., R. D., Phila., Pa.

## Pumps. (Hydraulic.)

Buffalo Steam Pump Co., Buffalo, N. Y.  
 Cameron Steam Pump Wks., A. S., New York, N. Y.  
 Cardwell Machine Co., Richmond, Va.  
 Erie Pump & Equipment Co., Erie, Pa.  
 French Oil Mill Mehry Co., The Piqua, O.  
 Holland Mch. Co., New York, N. Y.

## Pumps. (Oil and Gasoline.)

Keystone Boiler & Fdry. Co., Columbia, Pa.

## Pumps. (Steam.)

Alberger Pump & Condenser Co., New York, N. Y.  
 Blake & Knowles Steam Pump Works, East Cambridge, Mass.  
 Blakeslee Mfg. Co., Du Quoin, Ill.  
 Buffalo Steam Pump Co., Buffalo, N. Y.  
 Cameron Steam Pump Wks., A. S., New York, N. Y.  
 Cameron & Barkley Co., Charleston, S. C.  
 Clayton Air Compressor Plant, Cambridge, Mass.  
 Cook, A. D., Lawrenceburg, Ind.  
 Deane Steam Pump Plant, Holyoke, Mass.  
 Fairbanks-Morse & Co., Atlanta, Ga.  
 Keystone Pump & Well Engine Co., Beaver Falls, Pa.  
 Murray Iron Works Co., Burlington, Ia.  
 Snow Steam Pump Plant, The New York, N. Y.  
 Worthington, Henry R., Harrison, N. J.

## Pumps. (Trenches.)

Affiliated Manufacturers Co., Milwaukee, Wis.  
 C. H. & E. Mfg. Co., Inc., Milwaukee, Wis.

## Pumps. (Carbine Driven.)

Sturtevant Co., B. F., Hyde Park, Boston, Mass.

## Pumps. (Vacuum.)

Cameron Steam Pump Wks., A. S., New York, N. Y.

## Pumps. (Water-works.)

Holland Mch. Co., New York, N. Y.  
 Platt Iron Works Co., Dayton, Ohio.

## Pump Leathers.

Graton & Knight Mfg. Co., Worcester, Mass.

## Punching and Shearing Machinery.

Bliss Co., E. W., Brooklyn, N. Y.

## Purchasing Agents.

U. S. Purchasing Corporation, New York, N. Y.

## Railroads.

[See Industrial, Agricultural and Commercial Opportunities.]

## Railroad Equipment and Supplies.

[See Second-hand.]

American Frog & Switch Co., Hamilton, O.  
 Bailey-Libby Co., The, Charleston, S. C.  
 Birmingham Rail & Loco. Co., Birmingham, Ala.  
 Cincinnati Frog & Switch Co., Cincinnati, O.  
 Cudd, Geo. B., Cincinnati, O.  
 Fairbanks-Morse & Co., Atlanta, Ga.  
 Foster Co., L. B., Pittsburgh, Pa.  
 Georgia Car & Locomotive Co., Atlanta, Ga.  
 Hirsch Rolling Mill Co., St. Louis, Mo.  
 Hoffman & Co., Inc., R. O., Baltimore, Md.  
 Hyde Bros. Steel & Rail Co., Pittsburgh, Pa.  
 Hyde, Chas., Pittsburgh, Pa.  
 Kirby Frog & Switch Co., Birmingham, Ala.  
 Macleary, J. H., Suffolk, Va.  
 National Steel Rail Co., St. Louis, Mo.  
 Reed Co., Howard W., Philadelphia, Pa.  
 Robinson & Orr, Pittsburgh, Pa.  
 Sherwood, E. O., New York, N. Y.  
 Southern Iron & Equipment Co., Atlanta, Ga.  
 Steel Rail Supply Co., The, New York, N. Y.  
 Thaw & Williams, Cincinnati, O.  
 United States Rail Co., Cumberland, Md.  
 West Virginia Rail Co., Huntington, W. Va.  
 Wilson & Co., E. H., Philadelphia, Pa.  
 Wilson Mach. Co., St. Louis, Mo.  
 Zelicker Supply Co., Walter A., St. Louis, Mo.

## Railroad Frogs &amp; Switches.

American Frog & Switch Co., Hamilton, O.  
 Cincinnati Frog & Switch Co., Cincinnati, O.  
 Conley Frog & Switch Co., Memphis, Tenn.  
 Hyde Bros. Steel & Rail Co., Pittsburgh, Pa.  
 Kirby Frog & Switch Co., Birmingham, Ala.  
 Robinson & Orr, Pittsburgh, Pa.  
 Sweet's Steel Co., Williamsport, Pa.  
 West Frog Co., Cincinnati, O.

## Rails. (Steel.)

Carnegie Steel Co., Pittsburgh, Pa.  
 Foster Co., L. B., Pittsburgh, Pa.  
 Franks, J. E., Atlanta, Ga.  
 Gulf States Steel Co., Birmingham, Ala.  
 Hirsch Rolling Mill Co., St. Louis, Mo.  
 Hoffman & Co., Inc., R. O., Baltimore, Md.  
 Hyde Bros. Steel & Rail Co., Pittsburgh, Pa.  
 Hyde, Chas., Pittsburgh, Pa.  
 Lackawanna Steel Co., Lackawanna, N. Y.  
 Lewis & Co., Henry, Philadelphia, Pa.  
 Macleary, J. H., Suffolk, Va.  
 National Steel Rail Co., St. Louis, Mo.  
 Republic Iron & Steel Co., Youngstown, O.  
 Robinson & Orr, Pittsburgh, Pa.  
 Sherwood, E. O., New York, N. Y.  
 Southern Iron & Equipment Co., Atlanta, Ga.  
 Steel Rail Supply Co., The, New York, N. Y.  
 Sweet's Steel Co., Williamsport, Pa.  
 Tennessee Coal, Iron & R. R. Co., Birm'gh'm, Ala.  
 United States Rail Co., Cumberland, Md.  
 West Virginia Rail Co., Huntington, W. Va.  
 Wilson & Co., E. H., Philadelphia, Pa.

## Rail Braces, Crossings, etc. [See R. R. Frogs and Switches.]

## Railings and Grilles. (Brass.)

Newman Mfg. Co., Cincinnati, O.

## Railways. (Industrial.)

Chase Fdry. & Mfg. Co., Columbus, O.  
 Cincinnati Frog & Switch Co., Cincinnati, O.  
 Hunt Co., Inc., C. W., West New Brighton, N. Y.

## Rams. (Hydraulic.) [See Hydraulic Ram.]

## Reamers.

Morse Twist Drill & Mch. Co., New Bedford, Mass.

## Reeds.

American Supply Co., Providence, R. I.

## Refrigerating Machinery and Apparatus.

Husterman & Cramer Co., The, Detroit, Mich.  
 Portsmouth Engine Co., Portsmouth, Del.  
 Remington Machine Co., Wilmington, Del.  
 Vilter Mfg. Co., Milwaukee, Wis.  
 Vogt Machine Co., Henry, Louisville, Ky.  
 York Mfg. Co., York, Pa.

## Reinforcing Bars. [See Concrete Reinforcing Bars.]

River and Harbor Improvements. (Dredges,  
 Docks, Wharves, etc.)  
 Globe Dredging Co., Savannah, Ga.

## Road Expansion Joints.

Philip Carey Co., The, Cincinnati, Ohio.

## Road Machinery.

Austin-Western Road Mch. Co., The, Chicago, Ill.  
 Buffalo Steam Roller Co., Buffalo, N. Y.  
 Erie Machine Shops, Erie, Pa.  
 Gallon Iron Works & Mfg. Co., The, Gallon, Ohio.  
 Holt Manufacturing Co., Inc., The, Peoria, Ill.  
 Kelly Springfield Road Roller Co., Springfield, O.  
 Kilbourne & Jacobs Mfg. Co., Columbus, Ohio.  
 Russell Grader Mfg. Co., Minneapolis, Minn.  
 Thew Automatic Shovel Co., Lorain, Ohio.  
 Universal Road Mch. Co., Kingston, N. Y.  
 Western Wheel Scraper Co., Aurora, Ill.

## Roadmaking Materials.

Barber Asphalt Paving Co., Philadelphia, Pa.  
 Barrett Mfg. Co., Philadelphia, Pa.  
 Romaine Road Corp. of America, Cleveland, Ohio.  
 Semet-Solvay Co., Solvay, N. Y.  
 Standard Oil Co., Inc., Newark, N. J.  
 U. S. Asphalt Refining Co., New York, N. Y.

## Road Binders.

Barber Asphalt Paving Co., Philadelphia, Pa.  
 Barrett Mfg. Co., Phila., Pa.  
 Semet-Solvay Co., Solvay, N. Y.  
 Standard Oil Co., Newark, N. J.  
 U. S. Asphalt Refining Co., New York, N. Y.

## Road Rollers. (Steam.)

Austin-Western Road Mch. Co., The, Chicago, Ill.  
 Barber Asphalt Paving Co., Iroquois Works, Buffalo, N. Y.  
 Buffalo Steam Roller Co., Buffalo, N. Y.  
 Erie Machine Shops, Erie, Pa.  
 Kelly Springfield Road Roller Co., Springfield, O.  
 Ohio Tractor-Roller Sales Co., Columbus, Ohio.  
 Universal Road Mch. Co., Kingston, N. Y.

## Road Oil.

Gulf Refining Co., Pittsburgh, Pa.  
 Standard Oil Co., Inc., Newark, N. J.  
 U. S. Asphalt Refining Co., New York, N. Y.  
 U. S. Asphalt Refining Co., New York, N. Y.

## Road Preservatives.

Barrett Mfg. Co., Philadelphia, Pa.  
 Gulf Refining Co., Pittsburgh, Pa.  
 Semet-Solvay Co., Solvay, N. Y.  
 Standard Oil Co., Inc., Newark, N. J.  
 U. S. Asphalt Refining Co., New York, N. Y.

## Road Scarifiers.

Buffalo Steam Roller Co., Buffalo, N. Y.  
 Gallon Iron Works & Mfg. Co., The, Gallon, Ohio

## Rock Crushers. [See Crushers, Rock.]

Rollers. (For Moving Houses, Machinery, Etc.)  
 Ogden, O. O., Baton Rouge, La.

## Roller Covering Supplies.

American Supply Co., Providence, R. I.

## Roofing. (Ready Prepared: Felt, Tar, Asbestos, Asphalt.)

American Sheet & Tin Plate Co., Pittsburgh, Pa.  
 Asbestos Protected Metal Co., Pittsburgh, Pa.  
 Barrett Mfg. Co., Philadelphia, Pa.  
 Cameron & Barkley Co., Charleston, S. C.  
 Edwards Mfg. Co., The, Cincinnati, O.  
 Hyndman Roofing Co., Cincinnati, O.  
 Southern Sheet & Tin Plate Co., Ashland, Ky.

## Roofing. (Metal Shingles.) [See Shingles, Metal.]

Bristol Metal Mfg. Co., Bristol, Va.-Tenn.  
 Cortright Metal Roofing Co., Philadelphia, Pa.  
 Edwards Mfg. Co., The, Cincinnati, O.  
 Hyndman Roofing Co., Cincinnati, O.  
 Southern Sheet & Tin Plate Co., Ashland, Ky.

## Roofing. (Slate.)

East Bangor Slate Co., East Bangor, Pa.  
 Genuine Bangor Slate Co., Easton, Pa.  
 Johnson, E. J., New York, N. Y.  
 Standard State Corp., Esmond, Va.

## Roofing and Siding. (Metal.)

American Sheet & Tin Plate Co., Pittsburgh, Pa.  
 Asbestos Protected Metal Co., Pittsburgh, Pa.  
 Cameron & Barkley Co., Charleston, S. C.  
 Cortright Metal Roofing Co., Philadelphia, Pa.  
 Edwards Mfg. Co., The, Cincinnati, O.  
 Hyndman Roofing Co., Cincinnati, O.  
 Southern Sheet & Tin Plate Co., Ashland, Ky.  
 Steel Products Co., The, Savannah, Ga.  
 Tennessee Metal Culvert Co., Nashville, Tenn.  
 Whitaker-Glessner Co., Portsmouth Works, Portsmouth, Ohio.  
 Youngstown Sheet & Tube Co., Youngstown, O.

## Ropes. (Manila, Sisal, Hemp, etc.)

Broderick & Bascom Rope Co., St. Louis, Mo.  
 Columbian Rope Co., Auburn, N. Y.  
 Waterbury Co., New York, N. Y.  
 Wood's Sons Co., T. B., Chambersburg, Pa.

## Ropes. (Wire.) [See Wire Rope.]

American Steel & Wire Co., Chicago, Ill.  
 Broderick & Bascom Rope Co., St. Louis, Mo.  
 Hunt Co., Inc., C. W., West New Brighton, N. Y.  
 Roebing's Sons Co., John A., Trenton, N. J.  
 Waterbury Co., New York, N. Y.  
 Youngstown Sheet & Tube Co., Youngstown, O.

## Rubber Goods.

Kureka Fire Hose Mfg. Co., New York, N. Y.  
 Goodyear Tire & Rubber Co., Akron, O.

## Rules. (Steel.)

Larkin Rule Co., Saginaw, Mich.  
 Starrett Co., L. S., Athol, Mass.

## Safes and Vaults.

York Safe & Lock Co., York, Pa.

## Sand.

Arundel Sand & Gravel Co., Baltimore, Md.  
 Kirkpatrick Sand & Cement Co., Birmingham, Ala.

## Sand. (Foundry.)

Newport Sand Bank Co., Inc., Newport, Ky.

## Sand Dryers.

American Process Co., New York, N. Y.  
 Ripley Foundry & Mach. Co., The, Ripley, Ohio.

## Sap Stain Preventive.

Church & Dwight Co., New York, N. Y.

## Sash Chains.

Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.

## Saws.

Gerlach Co., Peter, Cleveland, O.  
 Huther Bros. Saw Mfg. Co., Inc., Rochester, N. Y.

## Saws. (Hack.)

Starrett Co., L. S., Athol, Mass.

## Saw Rigs. (Portable.)

C. H. & E. Mfg. Co., Inc., Milwaukee, Wis.

## Sawmill Dogs.

Soule Steam Feed Works, Meridian, Miss.

## Sawmills.

Gainesville Iron Works, Gainesville, Ga.  
 Knight Mfg. Co., Canton, O.

## Sawmill Machinery.

Bailey-Libby Co., Charleston, S. C.  
 Cameron & Barkley Co., Charleston, S. C.  
 Knight Mfg. Co., Canton, O.  
 Mecklenburg Iron Works, Charlotte, N. C.  
 Schofield Iron Works, Macon, Ga.  
 Southern Engine & Boiler Wks., Jackson, Tenn.

## Saw Sharpeners.

Carborundum Co., Niagara Falls, N. Y.  
 Vitified Wheel Co., Westfield, Mass.

## Saw Sharpeners and Files. (Cotton Gin.)

Carver Cotton Gin Co., East Bridgewater, Mass.

## Scales.

Standard Scale & Supply Co., Pittsburgh, Pa.

## Screens. (Fly, Window and Door.)

New Jersey Wire Cloth Co., Trenton, N. J.

## Screens. (Mining, Stone, etc.)

Erdie Perforating Co., Rochester, N. Y.  
 Hendrick Mfg. Co., Carbondale, Pa.  
 Jeffrey Mfg. Co., Columbus, O.  
 McLanahan-Stone Mach. Co., Hollidaysburg, Pa.  
 Mundt & Sons, Charles, Jersey City, N. J.  
 New Jersey Wire Cloth Co., Trenton, N. J.

## Screenings. (For Concrete and Road Construc-

tion.)  
 American Ballast Co., Knoxville, Tenn.

## Screws. (Machine.)

Progressive Mfg. Co., Torrington, Conn.

## Screws. (Safety Set.)

Allen Manufacturing Co., Inc., Hartford, Conn.

## Screw Machine Products.

Progressive Mfg. Co., Torrington, Conn.

## Separators. (Dust.)

Buffalo Forge Co., Buffalo, N. Y.  
 Raymond Bros. Impact Pulv. Co., Chicago, Ill.

## Sewer Flushing Siphons.

Pacific Flush Tank Co., New York, N. Y.

## Sewer Joint Compounds.

Pacific Flush Tank Co., New York, N. Y.

## Sewer Pipes. (Vitrified.)

Bannon Pipe Co., P., Louisville, Ky.  
 Blackmer & Post Pipe Co., St. Louis, Mo.  
 Cannelton Sewer Pipe Co., Cannelton, Ind.  
 Owensboro Sewer Pipe Co., Owensboro, Ky.  
 Pomona Terra-Cotta Co., Pomona, N. C.  
 Southern Sewer Pipe Co., Birmingham, Ala.  
 Stevens Sons Co., H., Macon, Ga.

## Sewer Pipe and Drains. (Monolithic Concrete)

Requarth Co., C. W., Charlotte, N. C.

## Sewage Pumping and Disposal Apparatus.

Pacific Flush Tank Co., New York, N. Y.

## Shafting. (Cold Rolled Steel.)

American Steel & Wire Co., Chicago, Ill.

## Shafting. (Polished Steel.)

Jones & Laughlin Steel Co., Pittsburgh, Pa.

Madart Patent Pulley Co., St. Louis, Mo.  
 Pardee Works Co., Perth Amboy, N. J.  
 Republic Iron & Steel Co., Youngstown, O.  
 Union Drawn Steel Co., Beaver Falls, Pa.

## Shafting. [See Pulleys, Shafting and Hangers.]

Sharpening Stones.  
 Carborundum Co., Niagara Falls, N. Y.  
 Vitified Wheel Co., Westfield, Mass.

## Sheet, Brass and Copper.

McKenna Bros. Brass Co., Pittsburgh, Pa.

## Sheet Metal Work.

Atlas Metal Works, Dallas, Tex.  
 Dixie Culvert & Metal Co., Atlanta, Ga.  
 Fouts Co., C. C., Middletown, O.  
 Lone Star Culvert Co., Houston, Tex.

Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.  
 Salisbury Metal Culvert Co., Salisbury, N. C.  
 South Atlantic Blow Pipe & Sheet Metal Co., Savannah, Ga.

Steel Products Co., The, Savannah, Ga.  
 Tennessee Metal Culvert Co., Nashville, Tenn.  
 Virginia Metal Culvert Co., Roanoke, Va.  
 Voigtman & Co., Chicago, Ill.

## Sheet Metal Working Machinery.

Wiles Co., E. W., Brooklyn, N. Y.

Eagle Mfg. Co., Cincinnati, Ohio.

## Sheet Steel and Iron.

American Sheet & Tin Plate Co., Pittsburgh, Pa.  
 Cincinnati Iron & Steel Co., Cincinnati, O.  
 La Belle Iron Works, Steubenville, O.

Republic Iron & Steel Co., Youngstown, O.  
 Southern Sheet & Tin Plate Co., Ashland, Ky.  
 Tennessee Coal, Iron & R. R. Co., Birm'gh'm, Ala.  
 Whitaker-Glessner Co., Portsmouth Works, Portsmouth, Ohio.

Wood Iron & Steel Co., Alan, Philadelphia, Pa.  
 Youngstown Sheet & Tube Co., The, Youngstown, O.

## Shelving. [Steel] Vault, Store, Etc.]

Van Hurlingen, J. M., Atlanta, Ga.

## Shingles. (Metal.)

Bristol Metal Mfg. Co., Bristol, Va.-Tenn.  
 Cortright Metal Roofing Co., Philadelphia, Pa.  
 Edwards Mfg. Co., Cincinnati, O.  
 Hyndman Roofing Co., Cincinnati, O.  
 Southern Sheet & Tin Plate Co., Ashland, Ky.

## Shop Furniture. (Steel.)

Merritt & Co., Camden, N. J.

## Shovels. (Special for Any Purpose.)

Conneaut Shovel Co., The, Conneaut, Ohio.

## Shovels. (Steel, Brass, Aluminum, etc.)

Conneaut Shovel Co., The, Conneaut, Ohio.

## Shutters. (Iron.)

Boiles Iron & Wire Works, J. E., Detroit, Mich.  
 Chesapeake Iron Works, Baltimore, Md.

## Shutters. (Steel Rolling.)

Kinnear Mfg. Co., Columbus, O.

## Shutters. (Tin Clad.)

Victor Mfg. Co., Newburyport, Mass.

## Silos. (Metal.)

Canton Culvert & Silo Co., Canton, O.  
 Dixie Culvert & Metal Co., Atlanta, Ga.  
 Fouts Co., C. C., Middletown, O.  
 Lone Star Culvert Co., Houston, Tex.  
 Tennessee Metal Culvert Co., Nashville, Tenn.  
 Virginia Metal Culvert Co., Roanoke, Va.

## Slate. (Roofing, Sanitary, Structural, etc.)

East

**Steel Buildings. (Designers, Builders.)**

Amer. Bridge Co., of New York, N. Y.  
 Belmont Iron Works, Philadelphia, Pa.  
 Case Crane & Engineering Co., Columbus, Ohio.  
 Champion Bridge Co., Wilmington, O.  
 Chesapeake Iron Works, Baltimore, Md.  
 Des Moines Bridge & Iron Co., Des Moines, Ia.  
 Phoenix Iron Co., Philadelphia, Pa.  
 Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
 Richmond Structural Steel Co., Richmond, Va.  
 Schreiber & Sons Co., The L., Cincinnati, O.  
 Speed Architectural Iron Wks., Louisville, Ky.  
 Turner, C. A. F., Minneapolis, Minn.  
 Virginia Bridge & Iron Co., Roanoke, Va.

**Steel Castings.**

Gracible Steel Castings Co., Lansdowne, Pa.  
 Hoffman & Co., Inc., R. O., Baltimore, Md.  
 Riverside Steel Casting Co., Newark, N. J.

**Steel Plate Work.**

Casey-Hedger Co., Chattanooga, Tenn.  
 Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
 Coatesville Boiler Works, Coatesville, Pa.  
 Hoffman & Co., Inc., R. O., Baltimore, Md.  
 Memphis Steel Construction Co., Memphis, Tenn.  
 Phoenix Iron Co., Philadelphia, Pa.  
 Struthers-Well Co., Warren, Pa.

**Steel Protector. (Concrete Curb, Steps, etc.)**

[See Curb Protector Steel.]

**Steel Sheet Piling.**

Carnegie Steel Co., Pittsburgh, Pa.  
 Granks, J. E., Atlanta, Ga.  
 Jones & Laughlin Steel Co., Pittsburgh, Pa.  
 Lackawanna Steel Co., Lackawanna, N. Y.

**Stencils.**

Baltimore Office Supply Co., Baltimore, Md.  
 Porman Co., J. F. W., Baltimore, Md.

**Stirrups. (Building.)**

Chesapeake Iron Works, Baltimore, Md.

**Stock Certificates, Bonds and Seals.**

Baltimore Office Supply Co., Baltimore, Md.  
 Porman Co., J. F. W., Baltimore, Md.

**Stokers. (Hand.)**

Huber Gate Bar & Stoking Co., Baltimore, Md.

**Stokers. (Mechanical.)**

Babcock & Wilcox Co., New York, N. Y.  
 Westinghouse Machine Co., Pittsburgh, Pa.

**Stone. (Building.)**

Atlantic Stone Co., Atlanta, Ga.  
 Bedford Steam Stone Works, Bedford, Ind.  
 Kirkpatrick Sand & Cement Co., Birmingham, Ala.

**Stone. (Crushed.) [See Crushed Stone.]****Stone and Gravel Plants.**

Weller Mfg. Co., Chicago, Ill.

**Storage Batteries.**

Ecc. Storage Battery Co., The, Philadelphia, Pa.  
 Westinghouse Machine Co., Pittsburgh, Pa.

**Strapping Leather.**

Grafton & Knight Mfg. Co., Worcester, Mass.

**Structural Steel and Iron.**

Allegheny Steel Co., Pittsburgh, Pa.  
 Amer. Bridge Co. of New York, N. Y.  
 Belmont Iron Works, Philadelphia, Pa.  
 Bourne-Fuller Co., The, Cleveland, Ohio.  
 Carnegie Steel Co., Pittsburgh, Pa.  
 Case Crane & Engineering Co., Columbus, Ohio.  
 Champion Bridge Co., Wilmington, O.  
 Chesapeake Iron Works, Baltimore, Md.  
 Chicago Bridge & Iron Works, Chicago, Ill.  
 Cincinnati Iron & Steel Co., Cincinnati, O.  
 Des Moines Bridge & Iron Co., Des Moines, Ia.  
 Dietrich Bros., Baltimore, Md.  
 East St. Louis Bridge Co., East St. Louis, Ill.  
 Grainger & Co., Inc., Louisville, Ky.  
 Hoffman & Co., Inc., R. O., Baltimore, Md.  
 Jones & Laughlin Steel Co., Pittsburgh, Pa.  
 Lackawanna Steel Co., Lackawanna, N. Y.  
 Memphis Steel Construction Co., Memphis, Tenn.  
 Phoenix Iron Co., Philadelphia, Pa.  
 Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
 Republic Iron & Steel Co., Youngstown, O.  
 Richmond Structural Steel Co., Richmond, Va.  
 Scafe & Sons Co., Wm. B., Pittsburgh, Pa.  
 Schreiber & Sons Co., The L., Cincinnati, O.  
 Speed Architectural Iron Works, Louisville, Ky.  
 Southern Sheet & Tin Plate Co., Ashland, Ky.  
 Steel Products Co., The, Savannah, Ga.  
 Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.  
 The Van Dorn Iron Works Co., Cleveland, Ohio.  
 Vincennes Bridge Co., Vincennes, Ind.  
 Virginia Bridge & Iron Co., Roanoke, Va.

**Stump Pullers.**

Himmerman Steel Co., Lone Tree, Iowa

**Sulphur.**

Union Sulphur Co., New York, N. Y.

**Super-Heaters. (Steam.)**

Babcock & Wilcox Co., New York, N. Y.  
 Power Specialty Co., New York, N. Y.

**Surfacing Machines. (For Floors.)**

Wayvel Chappell & Co., Chicago, Ill.

**Surveying Instruments.**

Weber & Co., F., Philadelphia, Pa.

**Sweeping Compound.**

Kildust Co., Rome, Ga.

**Swinging Engines.**

Dake Engine Co., Grand Haven, Mich.

**Switchboards, Switches, etc.**

General Electric Co., Schenectady, N. Y.

**Switches. [See Railroad Frogs and Switches.]****Switchstands.**

Weir Frog Co., Cincinnati, O.

**Tackle Blocks. (For Wire or Manila Rope.)**

Broderick & Bascom Rope Co., St. Louis, Mo.

**Talc and Soapstone Powders.**

Georgia Talc Co., Ashville, N. C.

**Tanks. (Iron and Steel.)**

American Bridge Co., New York, N. Y.  
 American Water Softener Co., Philadelphia, Pa.  
 Caldwell Co., Inc., W. E., Louisville, Ky.  
 Casey-Hedger Co., Chattanooga, Tenn.  
 Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
 Chicago Bridge & Iron Works, Chicago, Ill.  
 Coatesville Boiler Works, Coatesville, Pa.  
 Cole Mfg. Co., R. D., Newnan, Ga.  
 Des Moines Bridge & Iron Co., Des Moines, Ia.  
 Die Culvert & Metal Co., Atlanta, Ga.  
 Bartley Boiler Works, Montgomery, Ala.  
 Hendricks Mfg. Co., Carbondale, Pa.  
 Keeler Co., E., Williamsport, Pa.  
 Keystone Boiler & Foundry Co., Columbia, Pa.  
 Lombard Iron Works, Augusta, Ga.  
 Lookout Boiler & Mfg. Co., Chattanooga, Tenn.  
 Memphis Steel Construction Co., Memphis, Tenn.  
 Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.  
 Schofield Iron Works, Macon, Ga.  
 Southern Bridge & Tank Works, Memphis, Tenn.  
 Struthers-Well Co., Warren, Pa.  
 Tennessee Metal Culvert Co., Nashville, Tenn.  
 Twin City Boiler Works, Bristol, Va.-Tenn.  
 Virginia Bridge & Iron Co., Roanoke, Va.  
 Walsh & Weldner Boiler Co., Chattanooga, Tenn.

**Tanks. (Wood.)**

Caldwell Co., Inc., W. E., Louisville, Ky.  
 Davis & Son, G. M., Palisade, Fla.

**Tapes. (Measuring.)**

Lufkin Rule Co., Saginaw, Mich.  
 Starrett Co., L. S., Athol, Mass.

**Telephones. (Supplies, Equipment.)**

Piedmont Electric Co., Asheville, N. C.  
 Western Electric Co., New York, N. Y.

**Telephone Service.**

American Telephone & Telegraph Co.

**Terra-Cotta. (Ornamental.)**

Atlanta Terra-Cotta Co., Atlanta, Ga.  
 Pomona Terra-Cotta Co., Pomona, N. C.  
 Southern Building Material Co., Norfolk, Va.  
 Stevens' Sons Co., H., Macon, Ga.

**Threshers.**

Cardwell Machine Co., Richmond, Va.

**Tiering Machines. (Portable.)**

Economy Engineering Co., Chicago, Ill.

**Tile (Drain)**

Oconee Brick & Tile Co., Milledgeville, Ga.

**Tile (Interior)**

Amer. Enam. Brick & Tile Co., New York, N. Y.

**Tile. (Mantel and Promenade.)**

Hood Brick Co., B. Mifflin, Atlanta, Ga.

**Tile (Structural)**

Oconee Brick & Tile Co., Milledgeville, Ga.

**Timbers. (Crescoted.)**

American Crescote Works, New Orleans, La.  
 Republic Crescoting Co., Indianapolis, Ind.

**Tin and Terne Plates.**

American Sheet & Tin Plate Co., Pittsburgh, Pa.

**Tobacco Machinery.**

Buckeye Iron & Brass Works, Dayton, O.  
 Cardwell Machine Co., Richmond, Va.  
 Grote Mfg. Co., F., Evansville, Ind.

**Trucks. (Dry Kiln.)**

Moore Dry Kiln Co., L., Jacksonville, Fla.

**Trucks. (Platform, Freight, Mill, Factory, etc.)**

Barnstein Mfg. Co., Phila., Pa.  
 Chase Fdry. & Mfg. Co., Columbus, O.

**Trucks. (Storage Battery Auto.)**

Westinghouse Machine Co., Pittsburgh, Pa.

**Trust Companies. [See Bankers and Brokers.]****Tubes. (Boiler.)**

Allegheny Steel Co., Pittsburgh, Pa.  
 Cincinnati Iron & Steel Co., Cincinnati, O.  
 National Tube Co., Pittsburgh, Pa.

**Tube Well Strainers.**

Cook, A. D., Lawrenceburg, Ind.

**Tubing.**

La Belle Iron Works, Steubenville, O.  
 National Tube Co., Pittsburgh, Pa.  
 Youngstown Sheet & Tube Co., Youngstown, O.

**Turbines. (Hydraulic.)**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
 Davis Foundry & Machine Wks., Rome, Ga.  
 Leffel & Co., James, Springfield, O.  
 Salem Foundry & Machine Wks., Salem, Va.  
 Smith Co., H., Morgan, York, Pa.

**Turbines. (Steam.)**

Allis-Chalmers Mfg. Co., Milwaukee, Wis.  
 General Electric Co., Schenectady, N. Y.  
 Sturtevant Co., B. F., Hyde Park, Boston, Mass.  
 Terry Steam Turbine Co., Hartford, Conn.  
 Western Electric Co., New York, N. Y.  
 Westinghouse Machine Co., Pittsburgh, Pa.

**Turn Buckles.**

Broderick & Bascom Rope Co., St. Louis, Mo.

**Turntables.**

American Bridge Co., New York, N. Y.  
 Virginia Bridge & Iron Co., Roanoke, Va.

**Twines.**

Columbian Rope Co., Auburn, N. Y.

**Unions.**

Dart Mfg. Co., E. M., Providence, R. I.  
 National Tube Co., Pittsburgh, Pa.

**Upholstering Material. (For Auto's and Furniture)**

De Font Fabrikoid Co., Wilmington, Del.

## Important Information For Advertisers in Manufacturers Record

Publication day—Every Thursday.

Advertising copy not requiring proof must reach us one week in advance of publication day.

When proof is required, two weeks in advance.

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Four columns to page.

### TYPOGRAPHICAL ARRANGEMENT

We desire to use, as far as possible, uniform display type and borders and avoid the use of black background cuts. The uniform border is two-point plain rule for all spaces less than a full page.

Copy for advertisements other than those to be used in special departments should be prepared for two-column measure for spaces less than a quarter page; for a quarter page or larger, in two or four columns.

**Tools. (Machinists.)**

Holland Mfg. Co., Erie, Pa.  
 Morse Twist Drill & Mch. Co., New Bedford, Mass.

**Tools. (Mechanical.)**

Starrett Co., L. S., Athol, Mass.

**Tools. Pneumatic.**

Chicago Pneumatic Tool Co., Chicago, Ill.

**Torches.**

Wall Mfg. Supply Co., F., Allegheny, Pa.

**Towers. (Electric Transmission.)**

American Bridge Co. of New York, N. Y.  
 Scafe & Sons Co., Wm. B., Pittsburgh, Pa.

**Towers. (Steel and Wood.)**

Caldwell & Co., Inc., W. E., Louisville, Ky.  
 Chattanooga Boiler & Tank Co., Chattanooga, Tenn.  
 Chicago Bridge & Iron Works, Chicago, Ill.  
 Cole Mfg. Co., R. D., Newnan, Ga.  
 Columbia Pump & Well Co., Washington, D. C.  
 Des Moines Bridge & Iron Co., Des Moines, Ia.  
 Memphis Steel Const. Co., Memphis, Tenn.  
 Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

**Track Material. (Steam & Industrial Railroads.)**

Conley Frog & Switch Co., Memphis, Tenn.  
 Upon Nat. Co., Cleveland, O.

**Traction Engines.**

Fairbanks-Morse & Co., Atlanta, Ga.  
 Holt Mfg. Co., Inc., The, Florida, Ill.  
 Ohio Tractor-Roller Sales Co., Columbus, Ohio.

**Tramway. (Overhead)**

Amburn Co. (Tramway Department), New York, N. Y.  
 Spidel, J. G., Reading, Pa.

**Tramways. (Portable.)**

Amburn Co. (Tramway Department), New York, N. Y.

**Tramway. (Wire Rope)**

Amburn Co. (Tramway Department), New York, N. Y.

American Steel & Wire Co., Chicago, Ill.  
 Broderick & Bascom Rope Co., St. Louis, Mo.  
 Caldwell & Sons Co., H. W., Chicago, Ill.  
 Waterbury Co., New York, N. Y.

**Transformers.**

Triumph Electric Co., Cincinnati, O.

**Trench Excavator. [See Excavator (Trench).]****Vacuum Cleaning Apparatus.**

King Co., F. E., Norfolk, Va.  
 United Electric Co., The, Canton, O.

**Valves.**

Bourbon Copper & Brass Wks. Co., Cincinnati, O.  
 Columbian Iron Works, Chattanooga, Tenn.  
 Frick Co., The, Waynesboro, Pa.  
 Glamorgan Pipe & Fdry Co., Lynchburg, Va.  
 Jenkins Bros., New York, N. Y.  
 Lunkenheimer Co., The, Cincinnati, O.  
 National Tube Co., Pittsburgh, Pa.  
 Powell Co., Wm., Cincinnati, O.  
 Pittsburgh Valve Fdry. & Const. Co., Pittsburgh, Pa.  
 York Mfg. Co., York, Pa.

**Valve Boxes.**

Clark Co., H. W., Mattoon, Ill.

**Varnish.**

Berry Bros., Inc., Detroit, Mich.

**Veneer Machines.**

Titus, E. E., Petersburg, Va.

**Venetian Blinds.**

Wilson Corp., J. G., New York, N. Y.

**Ventilating Apparatus. (Engineers' and Contractors.)**

Buffalo Forge Co., Buffalo, N. Y.  
 Sturtevant Co., B. F., Hyde Park, Boston, Mass.

**Vices.**

Holland Mfg. Co., Erie, Pa.

**Wagons. (Dump.)**

Acme Wagon Co., Ennisville, Pa.  
 Western Wheeled Wagon Co., Aurora, Ill.

**Wagon Unloaders.**

Bonney Supply Co., Rochester, N. Y.

**Wall Coping.**

Southern Sewer Pipe Co., Birmingham, Ala.

**Wall Plugs. (Galvanized.)**

Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.

**Wall Tiles.**

Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.

**Washers. (Ore and Phosphate.)**

Bailey-Lehby Co., Charleston, S. C.  
 Cameron & Harkley Co., Charleston, S. C.  
 McLanahan-Stone Mach. Co., Hollidaysburg, Pa.

**Washers and Rivets. [See Bolts, Nuts, Rivets, Studs and Washers.]****Watchman's Clocks.**

Watchman's Clock & Supply Co., New York, N. Y.

**Water Filters. (See Filters, Water, etc.)****Waterproofing. (For Brick, Concrete, Granite, etc.)**

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 Barrett Mfg. Co., Philadelphia, Pa.  
 Johns-Manville Co., H. W., New York, N. Y.

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 International Filter Co., Chicago, Ill.  
 N. T. Cont. Jewell Filter Co., New York, N. Y.  
 Tacker & Laxon, Charlotte, N. C.

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 American Cast Iron Pipe Co., Birmingham, Ala.  
 American Pipe & Const. Co., Philadelphia, Pa.  
 Bourbon Copper & Brass Wks. Co., Cincinnati, O.  
 Clark Co., H. W., Mattoon, Ill.  
 Low & Sons, James B., Chicago, Ill.  
 Caldwell-Wilcox Co., Newburgh, N. Y.  
 Columbian Iron Works, Chattanooga, Tenn.  
 Donaldson Iron Co., Emaus, Pa.  
 Glamorgan Pipe & Foundry Co., Lynchburg, Va.  
 Keystone Pump & Well Engine Co., Beaver Falls, Pa.  
 Layne & Bowler Co., Houston, Tex.  
 Mason Iron & Steel Co., Mason, Ohio.  
 Pomona Terra-Cotta Co., Pomona, N. C.  
 Salem Fdry. & Machine Works, Salem, Va.  
 Standard Spiral Pipe Works, Chicago, Ill.  
 Stevens' Sons Co., H., Macon, Ga.  
 U. S. Cast Iron Pipe & Fdry. Co., Burlington, N. J.  
 Wood & Co., R. D., Philadelphia, Pa.

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 Keystone Pump & Well Engine Co., Beaver Falls, Pa.  
 Williams Bros., Elkhart, N. Y.

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 Oliver Mfg. Co., W. J., Knoxville, Tenn.

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Sterling Wheelbarrow Co., Milwaukee, Wis.

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 Edwards Mfg. Co., The, Cincinnati, O.  
 Voigtman & Co., Chicago, Ill.  
 Wagner's Sons Co., J. F., Louisville, Ky.

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 Cyclone Fence Co., Waukegan, Ill.  
 Roebing's Sons Co., John A., Trenton, N. J.  
 Youngstown Sheet & Tube Co., Youngstown, O.

**Wire. (Galvanized and Annealed.)**



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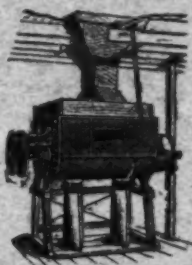


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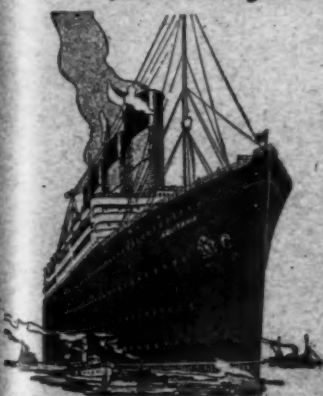
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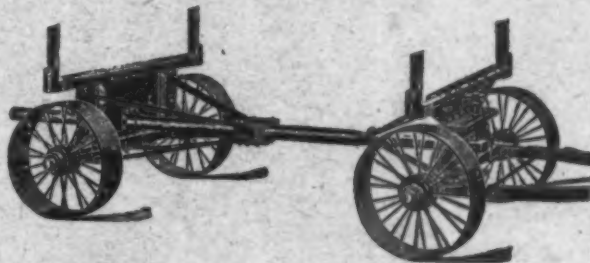
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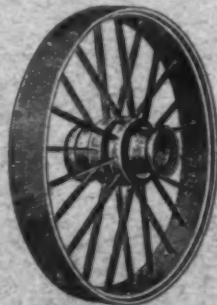
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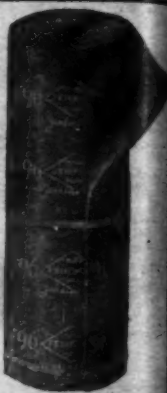
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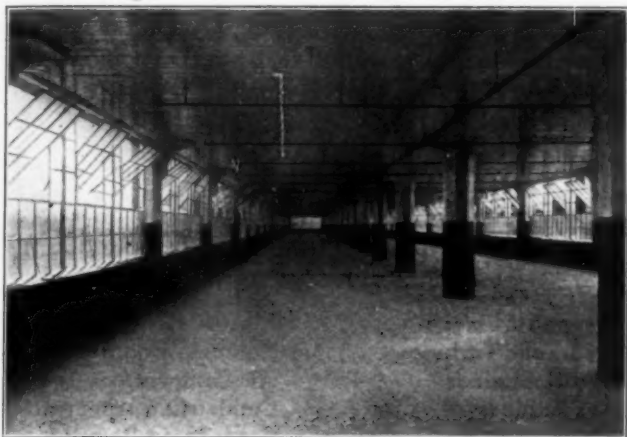
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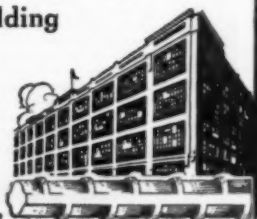
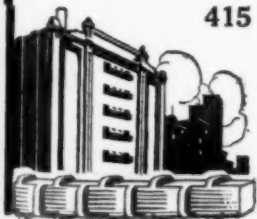
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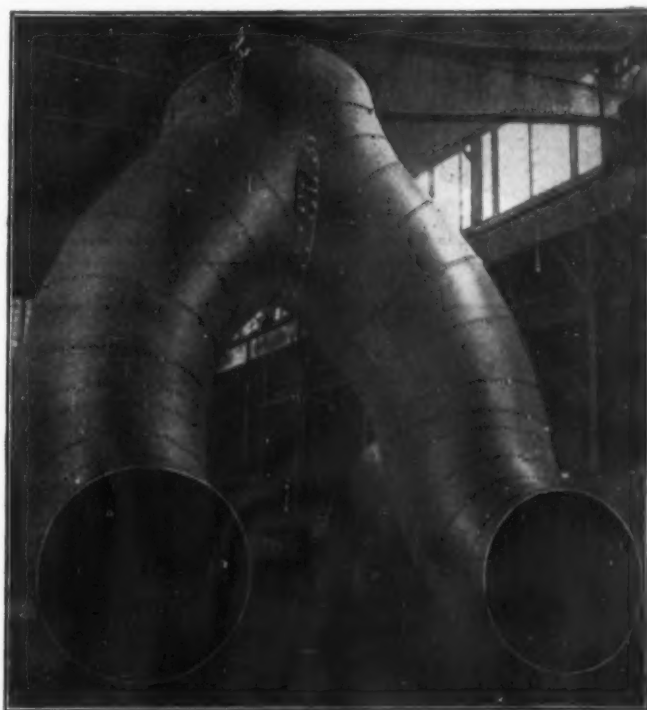
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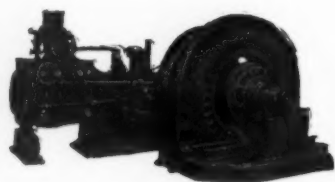
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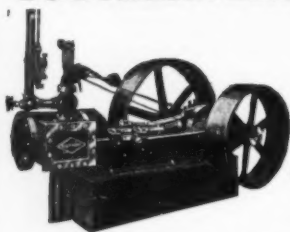
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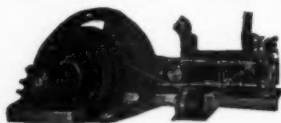
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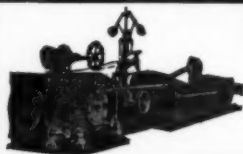
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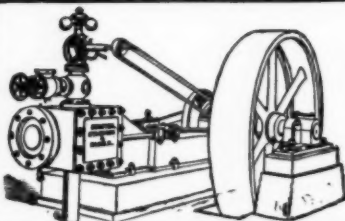
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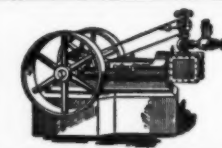
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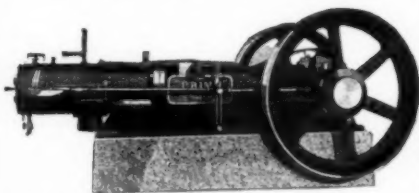
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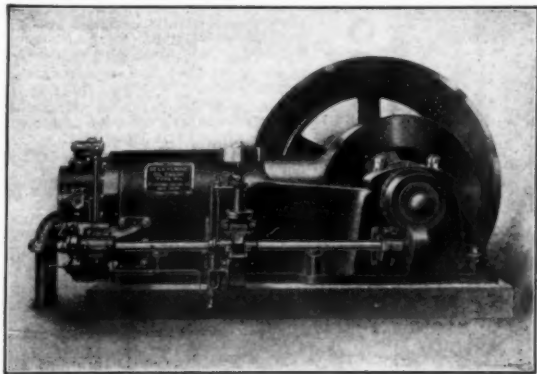
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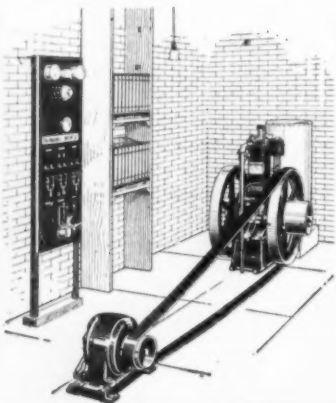
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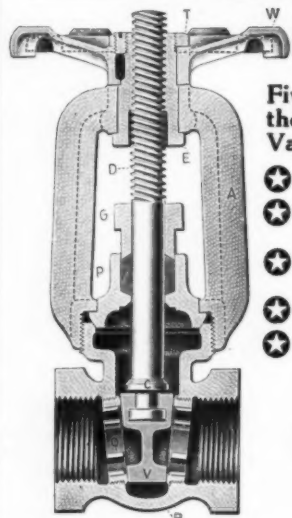
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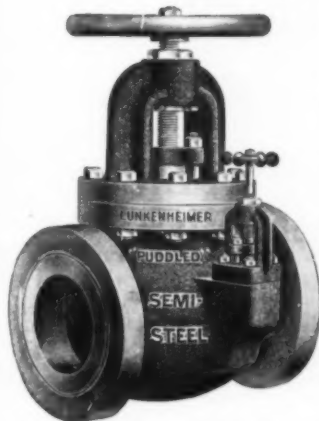
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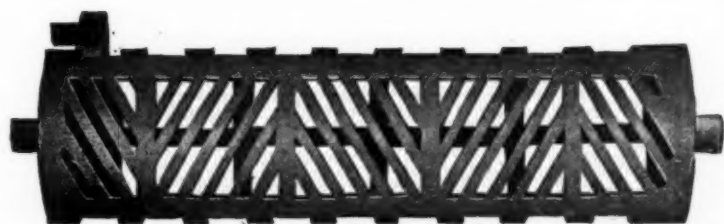
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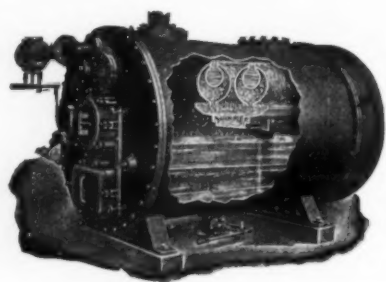
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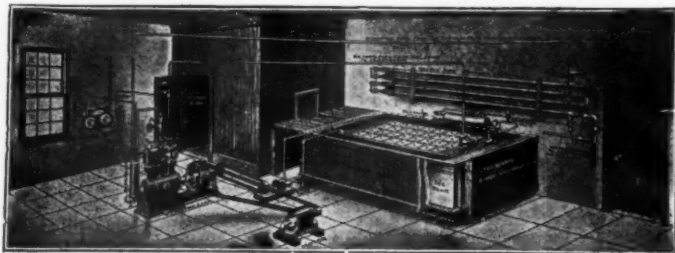
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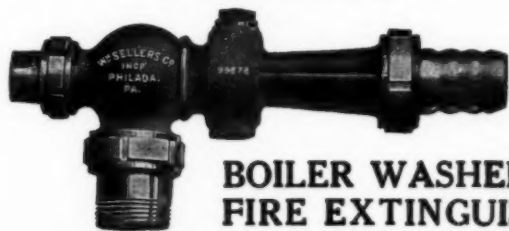
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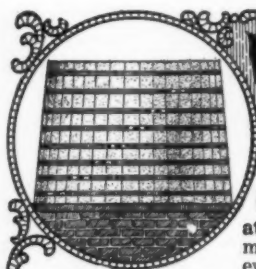
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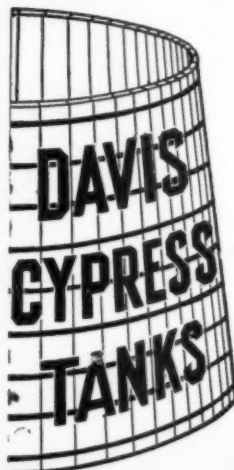
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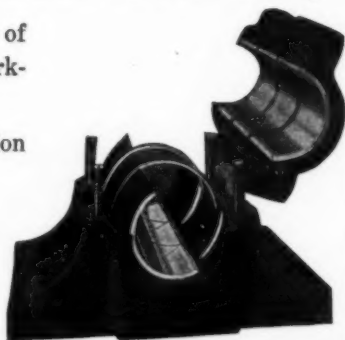
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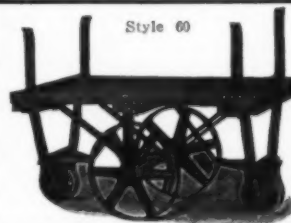


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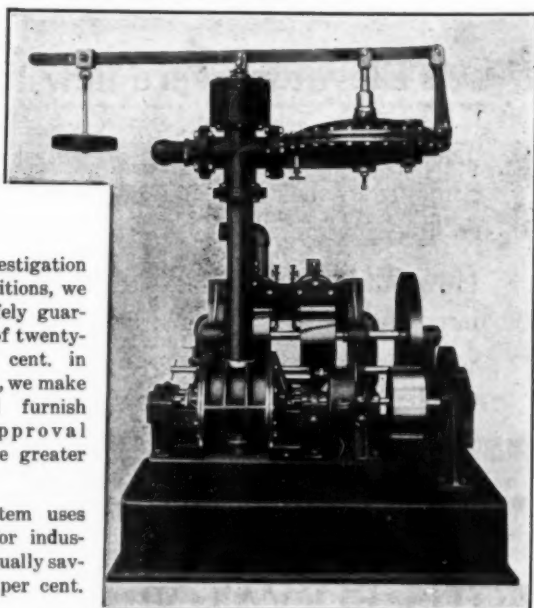
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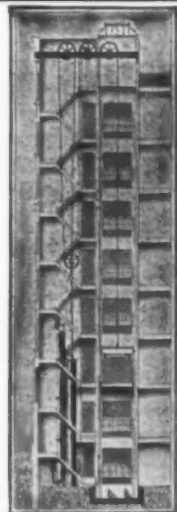
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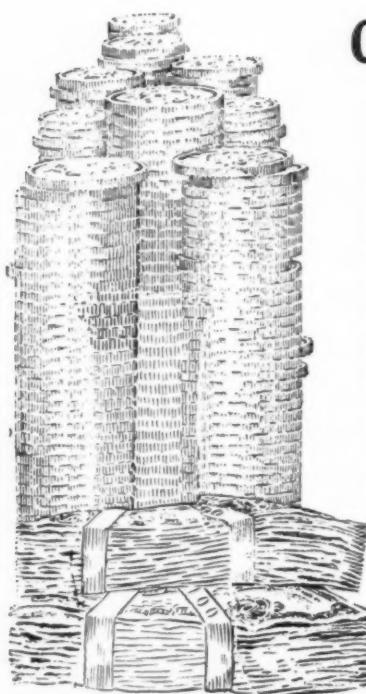


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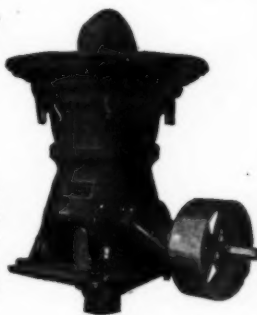
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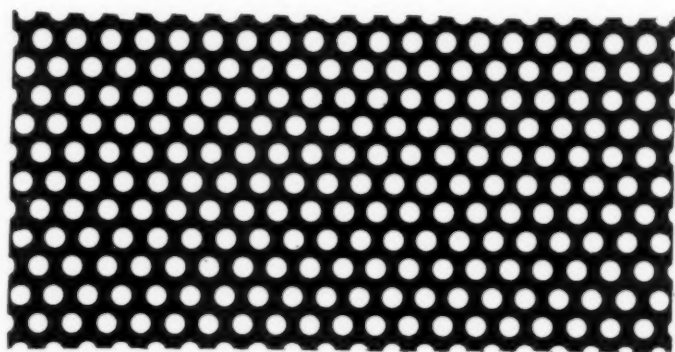
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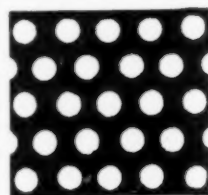
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FS-1

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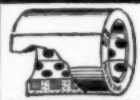
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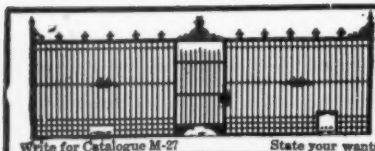
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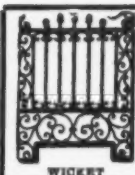
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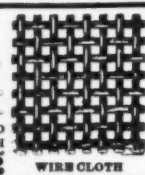
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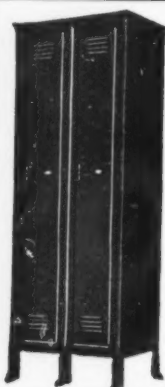
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Indestructible Sanitary Fireproof

Your Workmen will appreciate hav-  
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Steel & Malleable  
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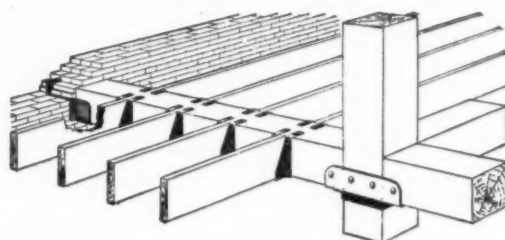
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fire-proof walls and floors  
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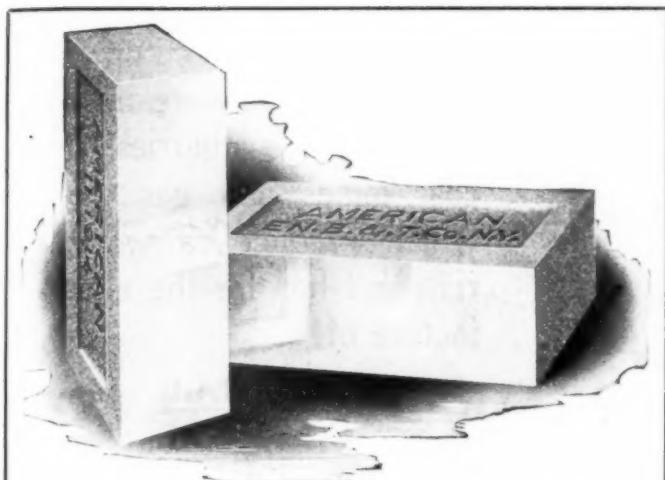
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We also make WINDOW GUARDS, RAILINGS, ORNAMENTAL WIRE, IRON AND BRONZE WORK.

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*"Like a Stone Wall to Rust & Corrosion"*

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A big step in pursuing the nation-wide policy of conservation is the choice of roofing material that will show an increased period of service.

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are the kind that are made to give your roof more service out of every one hundred square feet. "Like a stone wall to rust and corrosion," all odds are in their favor for long and efficient building protection.

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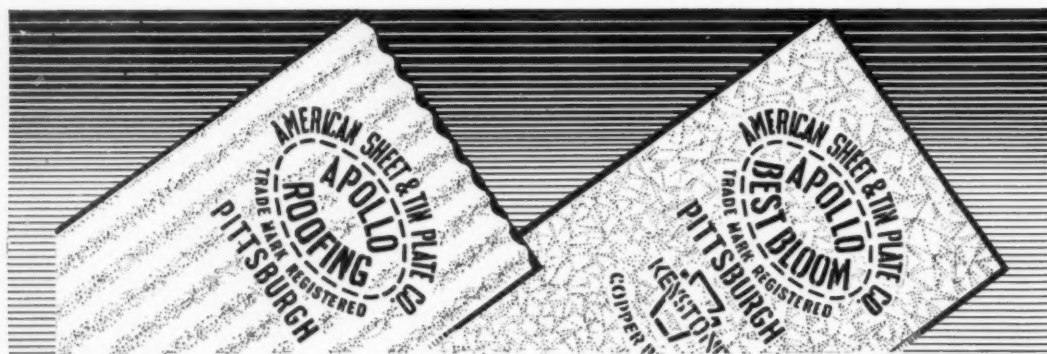
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 Sheet Steel Smoke-Stacks, Heating and Ventilating.  
 Agents for Tucc Stationary Vacuum Cleaning Systems.

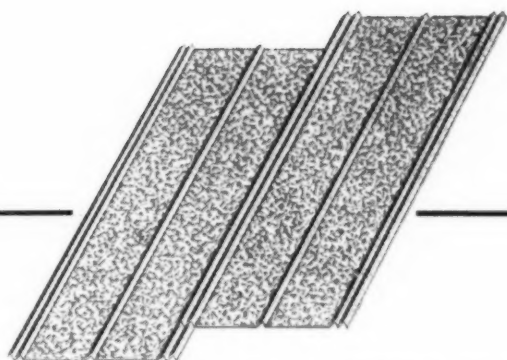
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The two "V's" on Edwards' Patent "Peerless" 5-Crimp roofing not only form an ideal gutter for rainwater—

They also enable you to lay this material upon roofs of any pitch.

### "Peerless" 5-Crimp Roofing

is so very rigid that it allows the placing of sheathing boards 10 to 12 inches apart. And not a single wood stick is needed. These are all arguments that appeal to your pocketbook.

"Peerless" is manufactured of top quality open-hearth steel, 5 to 12 feet long, painted or "Tightcote" galvanized. We especially recommend the latter.

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10



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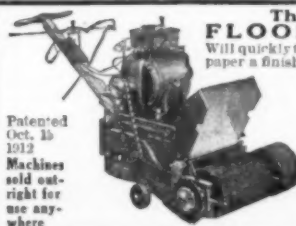
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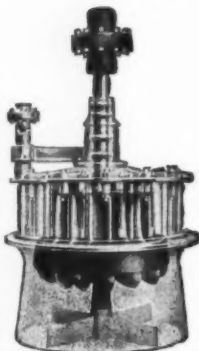
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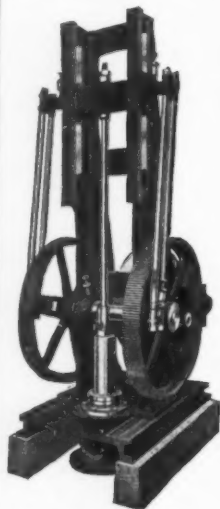
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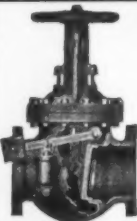
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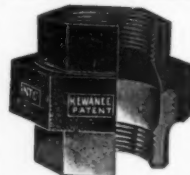
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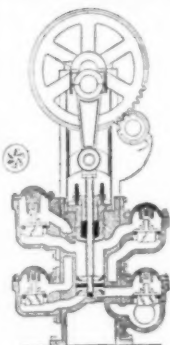
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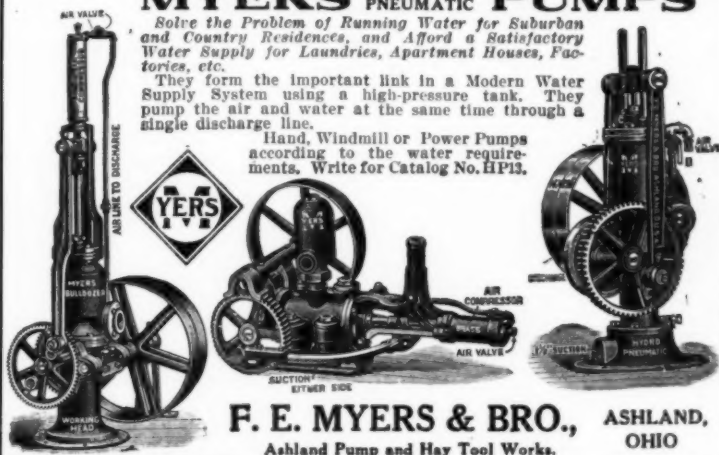
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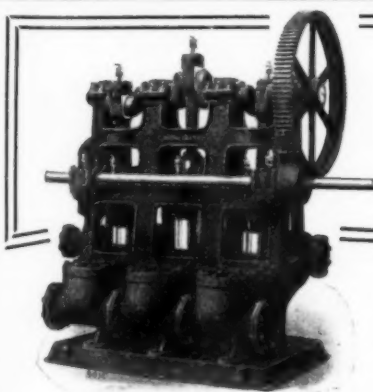
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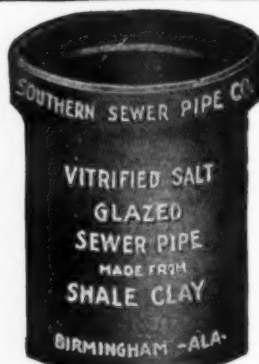
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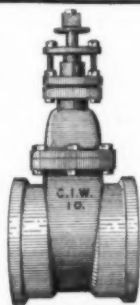
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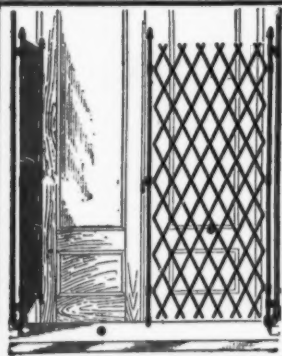
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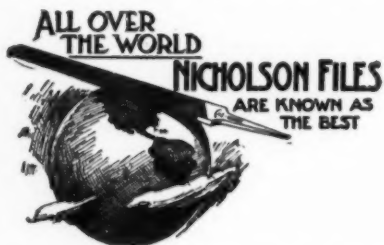
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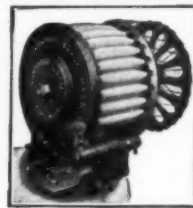
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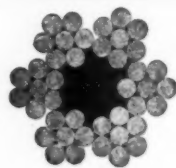
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